THE DEVELOPMENT OF A FRAMEWORK FOR DESIGN OF WEB PRESENCE AND ASSOCIATED ONLINE MARKETING STRATEGY FOR MUSEUMS IN SAUDI ARABIA

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Abstract

This research explores the development of a theoretical framework for the design of the web presence and how it can be usefully and practically employed with a view to increasing the number of visitors to cultural organisations such as museums in the Kingdom of Saudi Arabia.

The paper adopts a qualitative and quantitative research method approach, including a critical review of relevant literature on web presence (website and social media design) and digital marketing to determine how these online technologies can provide an innovative means of promoting museums online in Saudi Arabia.

At present, museums in Saudi Arabia use mainly traditional methods such as printed advertisement, for promotion which have a number of problems and limitations as the new challenge is not only how to reach your audience but also how to engage with them. However, with the adoption of internet technology, Saudi Arabia is quickly entering an information-based age and there is also the need for a shift in paradigm to correct misguided notions that museums are just for children or places for keeping worn-out artefacts.

This research describes the development of a new web-presence framework and argues it can provide a number of benefits, namely: wider dissemination of information about museums to visitors; online promotion of museums for the benefit of a wider international audience; promotion of Saudi's heritage, faith and culture online through social media; improved visitor satisfaction; effective management of visitors by museum workers; and effective payment online before actual visits to museums.

The research concludes with a number of recommendations for policy-makers in Saudi Arabia to take full advantage of the internet and social media to effectively promote cultural organisations through their web presence using the framework in order to engage with visitors for greater competitiveness on a global market.

DEDICATION

I have learned something from my mother; I have learned how to have strength. All praise is for God for giving me and teaching me strength through my mother. Without him I do not know how I would have survived these past few years.

This is a special page made especially for my Mother. She is to me as close as my heart. She is by far the strongest and kindest woman I have ever known. She has had many trials in her life, yet she overcame all of them and became even stronger and kinder then before.

Mom, words can never express the deepest gratitude I have for you. You have been there for me your whole life and I love you so much for it. I mostly admire and love you for the person you are.

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However, as mentioned in section 2.3.4, social media network sites have a finite lifetime; they have starting dates and many of them have shut down (see Figure 2-17). Choosing the right social media platform which is most likely to meet the strategic plan of the museum is more important than sticking to a single social media tool (McCann and McCulloch, 2012). Using a social media tool does not involve a standardised approach like a "one-size-fits-all" approach (Berthon et al., 2012). A museum has to customise the appearance of the social media tools and aspects of its

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Abbreviations and definition of terms

Abbreviation	Explanation
KSA	Kingdom of Saudi Arabia
CITC	Communications and Information Technology Commission in Saudi Arabia
ICT	Information and communication technology
SCTA	The Saudi Commission for Tourism and Antiquities
WWW	World Wide Web
CERN	European Organization for Nuclear Research
CMC	Computer-mediated communication
SNS	Social networking sites
UGC	User-generated content
IT	Information technology
TLD	Top-level domain
KACST	King Abdul-Aziz City of Science and Technology
STC	Saudi Telecom Company
IPv4	Internet Protocol version 4
IPv6	Internet Protocol version 6
SPSS	Statistical Package for the Social Sciences, a Windows based program that can be used to perform data entry and analysis and to create tables and graphs
DMU	De Montfort University
Web/Internet or online presence	The appearance of a Pearson or organisation on the web
DCM	Digital content marketing

CHAPTER ONE

INTRODUCTION

1 INTRODUCTION

1.1 Introduction

This chapter will cover the background to the problem statement, the problems associated with current KSA museum promotion strategies, the aims and objectives of this research project and finally, expected study outcome.

1.2 Research background

Despite the fact that, museums in the Kingdom of Saudi Arabia (KSA) have existed for more than 50 years and the first department created within the Ministry of Education in the KSA was the Department of Archaeology in 1963(Cassola, 2013), current museum culture is still not widespread within Saudi Arabian society. Most people in Saudi Arabia think that museums are just for small children, providing them with knowledge and cultural education (Abu Al-Khair 2010). Most people in Saudi Arabia do not know that there are many museums in the country; some of them are only aware of the one belonging to King Abdul-Aziz, known as the Museum of Saqr Al-Jazira (the Falcon of the Peninsula), just because it is located on the main ring road in the capital city of Riyadh (Ibraheem et al. 2010; AlRiyadh 2012).

Almost all people managing and working for museums are in strong agreement that museums play a very important role in providing a good environment for learning, education and research through interactive exhibitions, but this role needs to be promoted more to spread awareness in Saudi society (Abu Al-Khair 2010; ALHotan 2014; AlRiyadh 2012; Umran 2013).

While many museums have established their web presence, including on social media, relatively little formal research has been done on its actual use in the particular context of museums (Kremer, 2013). In addition, there is a greater lack of research on the subject of museums' use of the internet and social media in Saudi Arabia (Hamed, 2016).

The topic of this PhD study aims to fill the gap in the existing literature and to help museums in KSA to promote themselves effectively by designing a multimedia-

based framework for web presence and associated online marketing strategy. This developed framework will grow the current number of the museum taking advantage of the web presence considerably (based on the fact that this has been considered vital in KSA, see chapter 8), which enhance the value for doing this research.

1.3 Problem Statement

Museums in Saudi Arabia are still using the old traditional methods to deliver and promote information to their audiences (Hamed and Higgett, 2014). One of the major challenges for people who run museums in Saudi Arabia is the lack of knowledge of how to reach their audience (ALHotan, 2014). Museums in KSA are still far away from using online tools provided through the internet to promote themselves (Hamed, 2015). Hamed (2016) mentioned in his recent research that there are just a few museums taking advantage of the internet out of about 140 museums in the whole country. Five museums have or used to have a website, and few have or used to have a social media account (Hamed and Higgett, 2014; Hamed, 2015). Furthermore, there is a significant lack of knowledge about how small and medium organisation can develop their usage of the web presence effectively all over the world (Burgess et al. 2009; Abuhamdieh et al. 2002) and this gap is bigger in the context of KSA.

It is now clear that the Internet has become the fastest growing technology the world has ever seen(Kritzinger & Weideman 2015). However, in KSA, unlike other developing countries, there are fewer restrictions on financial resources. In fact, large sums of money are spent by the Saudi government in order to provide its people with the most current and best technologies, services and resources(Mirza 1998). Moreover, the Communications and Information Technology Commission in Saudi Arabia(CITC) (2009) maintains that KSA is well on its way to create an information-based society. This has been further spurred by the launch of telecom markets competition in the country, which was stimulated by the government's strategic thrust to further develop this sector. This places the KSA among the countries that are fast developing in information and communication technology (ICT) markets in that region (CITC 2009). The Internet service in the Kingdom of Saudi Arabia is considered as one of the fastest growing internet markets and the highest rank country among Arab countries in broadband

speed with average of 4.53 Mb/s, which places the kingdom at 36th in world ranking (Kassar, 2010; Alriyadh, 2015).

The Saudi Commission for Tourism and Antiquities (SCTA) have launched many programmes to change social attitudes and enhance the museum culture in Saudi Arabia (ALHotan 2014) in order for museums to achieve the social and cultural objectives for which they were built and are maintained.

Furthermore, the challenge of the Saudi Arabia's vision 2030 is establishing more museums and to attract global visitor using modern technology which requires a shift from using traditional methods to new online channels to deliver and promote information to their global audiences (Saudi Gazette 2016).

A combination of above problems; lack in using online marketing methods, lack in museum culture, lack in communication with audience and the challenge of KSA 2030 vision, with the fact that engagement with audience is the core of being successful in online marketing (Evans & Mckee 2010), leads to the conclusion that museums in KSA need to change their strategy.

1.4 Aim and objectives

The main research aim is to develop a theoretical framework for web presence and associated online marketing strategy for museums in Saudi Arabia. The specific objectives are:

i. To examine the existing web presence of museum in Saudi Arabia.
ii. To examine the perceptions of visitors about the existing web presence of the museum in Saudi Arabia.
iii. To review effective museum web presence and online marketing strategies within UK.
iv. To develop a multimedia-based framework for design web presence and associated online marketing strategy for museum in Saudi Arabia.
v. To assess the effectiveness of the designed multimedia-based framework for web presence and associated online marketing strategy for the museum in Saudi Arabia using a KSA based case study.

1.5 Research questions

From the objectives above, the relevant research questions that have emerged are as stated below:

i. What are the operational modalities of the existing web presence used by the Museums in Saudi Arabia?
ii. What are the perceptions of visitors about the existing web presence used by the Museums?
iii. What web design strategies are UK museums using to effectively engage with and increase visitors?
iv. What type of multimedia-based framework for web presence and associated online marketing strategy will be most effective for increasing online engagement of museums in KSA.

1.6 Terminology: Framework and model

Framework and models are very similar terms and they are often used interchangeably within the literature. They are related in meaning and conceptualisation terms in the research (Tobergte & Curtis 2013). Overall researchers generally tend to adopt one of the terms and then stick to that term throughout their work (Maxwell 2005).

A theoretical framework appointed as "key variables influence a phenomenon of interest and therefore what variables to measure and the rationale for relationships between the variables". And a model, usually, is an explained "representation of an idea or body of knowledge based on individual understanding of the relationships between the variables" (Tobergte & Curtis 2013; Imenda 2014).

In this research, the theoretical basis is founded on known principles and the variables from literature and primary study are used for developing a theoretical framework. When this research refers to theoretical framework, it is as Imanda (2014) the application of a theory derived from secondary and primary studies, that could be applied to solve the research problem.

1.7 Research methodology

The methodology is the key element in academic research. The methodology has been built, based on the objectives of the research and the research questions to be answered. The specific research objectives have been leading factors in choosing a suitable research methodology for this study. Different and multi-stage research methodological techniques have been selected to gather appropriate and relevant information in order to achieve the objectives of this research. A mixed methods approach is introduced to investigate the design of a framework and for assessing the web presence of museums in the KSA.

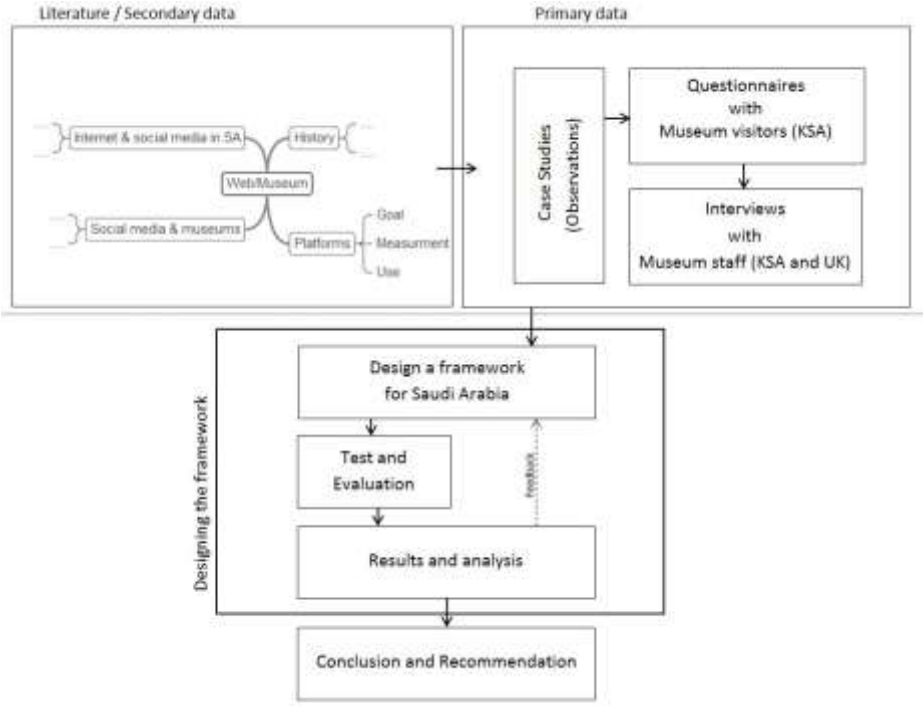


Figure 1-1 Research methodology framework

The general overview of the methodological framework is illustrated as three main boxes presented in Figure 1-1. Firstly, the researcher started by evaluating the related literature which has driven the research to the second box of primary study (data). And then the outcome from the primary study helped in developing and testing the proposed framework in the third box (designing the framework). This is discussed in further detail within chapter 3. The methodology stages have been built in a logical and step-by-step style, to make it easy and understandable for the reader.

1.8 Logical structure of the thesis

The structure of the thesis reflects the multi-stage methodology for this research, as mentioned in 1.7, to describe the stages of the overall methodological framework of this study. Figure 1-2 presents the structures of the thesis.

Chapter 1 introduces the study which includes; the background of the study, aims, objectives, research questions and the overview of the methodology.

Chapter 2 introduces the critical review of relevant literature in the subject area of this research and also presents a detailed background to this thesis.

Chapter 3 presents and discusses the research methodology in details.

Chapters 4, 5 and 6 present and discusses the primary research studies. Observational case studies are presented in chapter 4, a questionnaire with museum visitors in KSA is presented in chapter 5 and interviews with museum staff in both KSA and UK and field experts in UK are presented in chapter 6.

Chapter 7 presents the development of the proposed framework using the findings from the primary studies in chapters 4, 5 and 6.

Chapter 8 presents the evaluation of the designed framework in the previous chapter, in order to determine the effectiveness of the framework for a museum in KSA.

Finally, chapter 9 provides the general discussion, the research limitations, conclusions and recommendations. The chapter also suggested areas for other academics for further research.

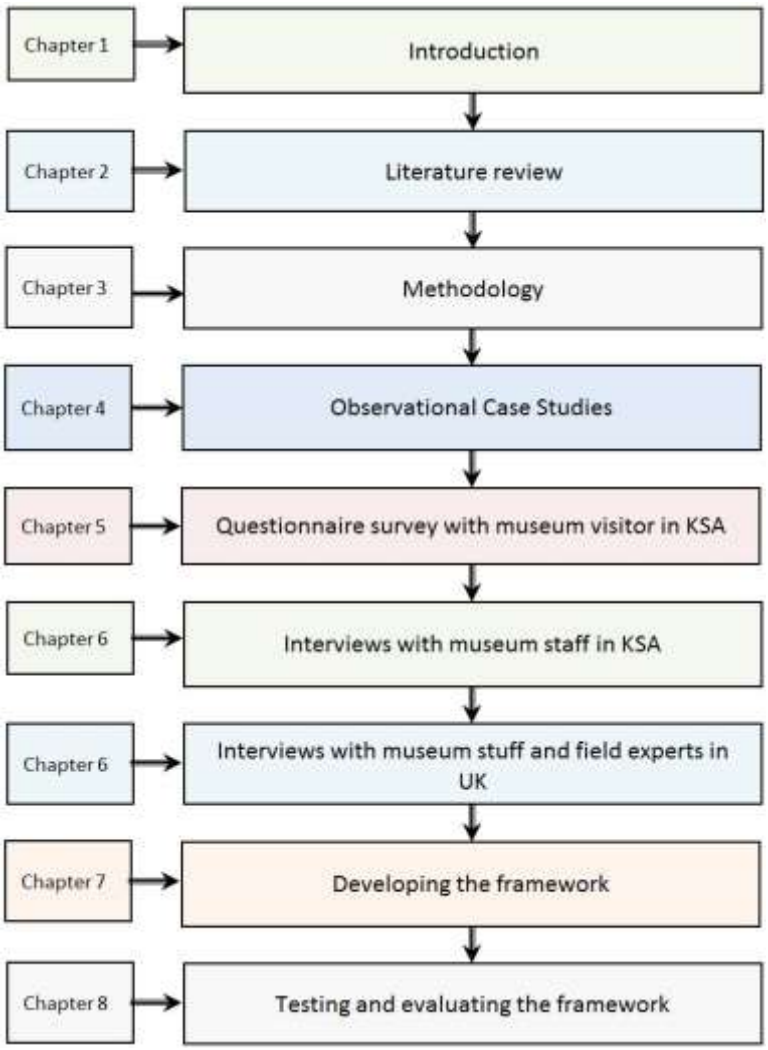


Figure 1-2 The structure of the thesis

1.9 Expected study outcome

It is anticipated that this study will contribute to the existing knowledge base with regards to improving museums of KSA online presence and online marketing strategies. The proposed theoretical design framework that will help museums in KSA to develop their web usage to effectively promote themselves and to enhance their engagement with audience will be the primary contribution. In addition, this study will also improve upon the existing museums online presence in KSA.

A further outcome of this study is as a potential source of information for Saudi Arabian public policy makers, about how to promote Saudi Arabian culture and increase visitor numbers to museums in KSA.

A final study contribution will be the production of museum website design checklist to promote good practice.

1.10 **Why Saudi Arabia**

Saudi Arabia is one of the most conservative Arabian Gulf states in the region. Its population who are mainly Arabs are estimated at 30.77 million including about 10 million foreigners (Central Department Of Statistics & Information, 2016). The country is the custodian of the two holy cities of Mecca and Medina, where Islam emerged and spread by the Prophet Mohamed (peace be upon him), and where the religion's holy book, the Qur'an, was revealed and documented. Saudi Arabia is considered to be one of the richest countries in the world in terms of its reserves of oil because underneath its surface lies more than 20% of the world's total reserves of petroleum (eia, 2013). These religious and economic factors earned Saudi Arabia a strong position in the Arab world and allowed it to play a leading role in the politics of the region(Al-Saggaf 2007).

One advantage of selecting KSA as a context for this research including its relatively huge size, that it has implication for other GCC countries (Gulf Cooperation Council). Another advantages is, the launch of Saudi Arabia's vision 2030 to establishing more museums and to attract global visitor using online channels to deliver and promote museum to their global audiences, which will support the benefit of this study.

Some of the pertinent reasons for selecting Saudi Arabia for this research project include the following;

- It is the researcher's home country.
- It is the largest country in the Middle East,
- It representative of the GCC in the language, culture, climate, architecture economy
- SCTA (The Saudi Commission for Tourism and Antiquities) has launch many programmes to enhance the museum culture, and
- The launch of Saudi Arabia's vision 2030 to establishing more museums and to attract global visitor using online channels to deliver and promote museum to their global audiences

1.11 Chapter summary

Chapter one provided the research background and confirmed the main research aim and objectives. This chapter has presented a general overview of the entire research work. It also illustrated the research methodology and how it hopes to contribute to knowledge. Finally, it closed with an overview of why KSA has been chosen in this study.

All charts, graphics, tables and photos are produced by the researcher unless otherwise mentioned.

CHAPTER TWO

LITERATURE REVIEW

2 LITERATURE REVIEW

2.1 Introduction

This chapter acknowledges prior research and examines a range of secondary sources concerning the study of the web presence of museums in the Kingdom of Saudi Arabia (KSA) and related issues in order to understand existing key issues and to provide a theoretical foundation for the forthcoming primary and experimental studies. This chapter is structured into seven sections. Section 2.2 provides an overview of museums and the museum culture in Saudi Arabia and section 2.3 provides an overview of the web presence of museums, focusing on the internet and social media, while the internet infrastructure is discussed in section 2.4. Museum marketing is discussed in section 2.5, the existing marketing strategy models are discussed in section 2.6 and finally, a brief conclusion for the chapter is presented in section 2.7.

2.2 Museum culture in Saudi Arabia: An overview

Museums have a long history in the KSA. The first department created within the Ministry of Education in the KSA was the Department of Archaeology in 1963, just 31 years after the unification of the Kingdom (Cassola, 2013). This means that museums in the KSA have existed for more than 50 years. However, in the KSA, it is not common for people to have awareness about museums and many archaeological sites have been destroyed, including those dating from the pre-Islamic and Islamic periods and other sites (Cassola, 2013; Umran, 2013).

The government has built many museums to display the history of Saudi Arabia and to protect its historical artefacts (SCTA, 2015). The first museum was created in the 1970s in order to preserve artefacts and promote the identity of Saudi Arabia, and there are now more than 150 museums around Saudi Arabia (Cassola 2013).

In July 2003, the Saudi government decided to place the Department of Antiquities and Museums under the authority of the Saudi Commission for Tourism and Antiquities; it had previously been under the authority of the Ministry of Education. To reflect this change of direction, the government changed the name of the commission to

the Saudi Commission for Tourism and Antiquities (SCTA), which is now responsible for all museums in the KSA. The government is now developing many of the existing museums; these museums opened in the 1980s and have similar overall designs. In addition, the government is building a few new museums in the Kingdom so that all provinces have their own museum (Ibraheem et al., 2010).

2.2.1 Types of museums

There are many ways to classify museums. Sometimes, the classification process is according to the source of funding (either the national government or local funds), or is based on the nature of the museum collections or on other criteria (Lewis 2014). However, Simon (2014) interestingly classified museums depending on visitor participation. Lewis (2014) classified museums into five basic types depending on their subject: general museums, history museums, science and technology museums, natural history museums, and natural science and art museums. Moreover, Simon (2014) similarly categorised museums into four basic types: history museums, art museums, science museums and children's museums.

2.2.2 Types of museums in Saudi Arabia

Museums in Saudi Arabia have also been categorised differently. Cassola (2013) divided museums in Saudi Arabia into museums affiliated with antiquities and the SCTA, museums affiliated with universities and institutes, specialised museums, and private museums (Cassola 2013). However, the SCTA classified museums in Saudi Arabia into just three categories: national museums, state museums, and private museums (SCTA, 2015). According to the SCTA statistics, there are about 82 state museums in Saudi Arabia, including the National Museum in Riyadh, in addition to 25 new museums that are under development (SCTA, 2015), and almost 150 private museums existing in the KSA today (Cassola 2013; Umran 2013). All private museums need a governmental licence, "which means that these museums commit to their obligations, responsibilities and procedures which must be taken, matters which must be provided for, and services offered: specific times for opening and closing, procedures taken against fire,

registration of objects" (Cassola 2013). In addition, the SCTA has the right to visit the museums to check the objects presented, which should not be contrary to the values of Islamic and Saudi society (Cassola 2013).

In comparison, types of museums in the UK, according to the Museums Association, are categorised depending on how they are managed, funded and owned. These museums are categorised as follows: national museums, local authority museums, English heritage properties, university museums, regimental museums and armouries, National Trust properties and private museums (Museums Association 2014).

It is absolutely clear that there are some commonalities and differences between the types of museums in Saudi Arabia and the UK. Both countries encompass several interlinked identities (Cassola 2013). Museum types in both countries are mainly identified according to their ownership, and how they are managed and funded, in addition to the presence of a minor number of specialist museums (Abu Al-Khair 2010). However, the majority of museums in Saudi Arabia have historical, archaeological and traditional objectives, whereas there is a much greater variety of museums in the UK with vaster collections (The British Museum, 2015).

2.2.3 Museum culture

According to (UNESCO 2015), museums are more than places in which objects are exhibited and conserved. They are strongly related to presenting the social sphere of life, expressible as a platform for discussions and debate, taking into consideration complicated societal issues and supporting public involvement. They also play a role in enhancing social unity. That is to say, museums can play a significant role in building and maintaining culture.

The museum plays a major role in cultural learning within society and between people of different cultures (Katy & Oppenheim 2009; Brinkman 2013), as the museum is an organisation that seeks to achieve cultural communication. Museums are more open to regional knowledge, public memory and cultural variety (Russo et al. 2007; Lehman & Roach 2011).

In addition, in the age of the information revolution and the internet, the use of digital media has become a part of culture, called the "digital culture". There are many

developments regarding the digital culture and museums are making concerted efforts in developed countries to present culture and heritage so that it is available in digital form (Pallas & Economides 2008). Furthermore, according to the Digital R&D report (2015), organisations, in the UK for instance, are expanding their social media efforts as online communication gathers pace. About 88 per cent of organisations in the UK currently publish their content onto free social media platforms (Digital R&D Report, 2015).

There are about 2,500 museums in the UK (Museums Association 2014; Mcintyre 2007). They receive about 100 million visits a year, including from people living in the UK (Museums Association 2014). According to the Association of Leading Visitor Attractions (ALVA, 2015) and the Museums Association (2015), about half of all adults living in the UK visited at least one museum in 2012. However, Jones and Bryan (2015) and Gompertz (2015) argue that the figures show that the number of visitors from the UK has decreased by 3 percent when comparing this to 2012.

Despite the argument that the percentage of people living in the UK who are visiting museums is reducing, from the figures above it is clear that people in the UK are still visiting museums. In addition, according to the Museums Association (2014), the UK still has the biggest cultural economy in the world. The statistics show that 0.1 per cent of the UK economy is directly related to the Museum and Gallery sector (Museums Association 2014).

2.2.4 Museum culture in Saudi Arabia

The museum culture in KSA is very different and is still not widespread within the Saudi Arabian society. Most people in Saudi Arabia think that museums are just for small children, providing them with knowledge and cultural education (Abu Al-Khair 2010). Tariq Al-Jbear, a museum official at the Museum of Education in Riyadh, also supported the view of Abu Al-Khair, adding that most people in Saudi Arabia do not know that there are many museums in the country; some of them are only aware of the one belonging to King Abdul-Aziz, known as the Museum of Saqr Al-Jazira (the Falcon of the Peninsula), just because it is located on the main ring road in the capital city of Riyadh (Ibraheem et al. 2010; AlRiyadh 2012). However, Al-Tayebat International City Museum,

one of the most famous museums in Jeddah, KSA, only attracts around 3,000 visitors annually (Umran 2013); see Figure 2-1.

Figure 2-1: Schoolchildren visiting a museum
(Source: AlHotan, 2014)

Almost all people managing and working for museums are in strong agreement that museums can play a very important role in providing a good environment for learning, education and research through interactive exhibitions, but this role needs to be promoted more to spread awareness in the society (Abu Al-Khair 2010; ALHotan 2014; AlRiyadh 2012; Umran 2013).

On the other hand, digital media in the age of the information revolution and the internet has spread widely in Saudi Arabia and has reshaped its culture (Nazer 2014). At the present time, Saudi Arabia is considered to have one of the highest numbers of internet users in the Middle East, and in some cases, the world (Baaboul 2013; Askool 2013). The Internet Live Stats (2015) report shows that just under two thirds of the Saudi population are using the internet, recording a growth rate of 11 per cent from the year before. According to The Social Clinic (2014), Saudi Arabia's first social media consultancy agency, more than 90 percent of internet users are using one or more social media platform; for instance, around a third of the Saudi Arabian population are active users of Facebook. The implication of the high internet and social media usage in KSA is that it will contribute to number of existing physical door visitors to the museums (Syaheezam et al. 2013).

2.3 Web and social media presence and the impact on museum

The terms web, social media, social networking sites (SNS), and user-generated content (UGC) are often used interchangeably in museum digital marketing design literature (Gu 2012). According to Dictionary.com, a website is defined as "a connected group of pages on the World Wide Web regarded as a single entity, usually maintained by one person or organisation and devoted to a single topic or several closely related topics". Within the academic literature, Cvijikj et al. define social media as "a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (Cvijikj et al., 2011, p22).

Social media is a type of media dispersed through online social interactions and takes on a variety of forms, including social networking sites, blogs, wikis, podcasts, photo and video sharing, social bookmarking, and virtual environments (Fletcher & Lee 2012). Gu (2012) adds that, in spite of the variety of tools and platforms, the most important feature of social media is that it allows instant public sharing of multimedia information between self-selected groups. In the words of the Australian researcher Gu (2012), cited in Russo et al. (2008, p.22): "Social media can be defined broadly as those that facilitate online communication, networking, and/or collaboration".

The speed and flexibility in which usage of social media can be customised means that it has the potential to increase an organisation's use of two-way and multi-way communication by promoting active participation from both organisations and the public (Fletcher and Lee, 2012). Social media is a modern and fast-developing phenomenon, and one that exists within the transient and flexible virtual space of the internet (Fell 2012). For organisations, it has been noted as a way to engage the audience (Fell, 2012). Normal activities of social media users include commenting and posting links on Facebook, discussing and tagging in groups on Flickr, blogging and sending media on WordPress or Tumblr, co-editing notations on Wikipedia, retweeting micro-messages on Twitter, and uploading and sharing videos on YouTube, to name but a few (Gu, 2012). "Social media it's not a physical thing and it's not an authority thing, it's an opinion based thing, therefore, it can make any organisation a quite personal place where they have not historically been very personal places" (Fell, 2012, p.34)

2.3.1 History of the internet and social media

The internet has dramatically changed the computer and communications industries. The development of the telegraph, radio, telephone, and computer set the stage for these technologies to be combined. The internet enables information to be immediately published worldwide, has information dissemination techniques, and is a medium for cooperation and interaction among people and their computers without being limited by geographical boundaries (Leiner et al. 2009).

The internet is one of the most effective innovations for the sustained exploration of the research and expansion in information infrastructure (Leiner et al. 2009). A massive amount of material is now available about the internet, covering the history of the internet, technology, and applications. A visit to almost any library or a bookshop will find shelves of material about the internet (Leiner et al. 2009).

Joseph Carl's memos of his “Galactic Network” concept, published by the Massachusetts Institute of Technology, constitutes the first recorded description of enabling social interactions through networking. He envisioned a globally connected collection of computers, from which everybody could access information from anywhere (Leiner et al. 2009).

By the end of 1969, four host computers were linked together, and the resultant Internet was started through a project named the Advanced Research Projects Agency Network (ARPANET), which was sponsored by the department of the Department of Defence in the United States called the Advanced Research Projects Agency (ARPA). It initially included ground-based packet radio networks, packet satellite networks and different networks (Leiner et al., 2009). In early 1972, it expanded its utility in the form of sending a text message between individuals working on faraway computer systems (Harrison & Barthel 2009). This was a precursor of today’s World Wide Web, which brought about a huge revolution in almost all forms of communication (Leiner et al., 2009, p.24).

2.3.2 Web 1.0

The World Wide Web was first developed by Tim Berners-Lee in 1989 to meet the requirement to automatically share information between experts and scientists in institutes and universities around the world (Home.cern, n.d) (Figure 2-2). Tim Berners-

Lee was a British scientist at the European Organization for Nuclear Research (CERN), which is today also known as the European Laboratory for Particle Physics. The initial idea behind the World Wide Web (WWW) was to integrate the technologies of hypertext, computer networking and single computers into a strong and fluent global information system (Home.cern, n.d).

Figure 2-2: Sir Tim Berners-Lee
(Source: CERN, 2014)

In 1989, Berners-Lee wrote the first proposal for the World Wide Web (Home.cern, n.d,; Berners-Lee, 1989). In 1990, an additional refinement was made by a systems engineer called Robert Cailliau (Home.cern, n.d.; Kremer, 2013). The World Wide Web was a "hypertext project" in which a "web" of "hypertext documents" could be viewed by "browsers" (Home.cern, n.d.). This project was also influenced by Vannevar Bush's work in 1945 (Kremer 2013).

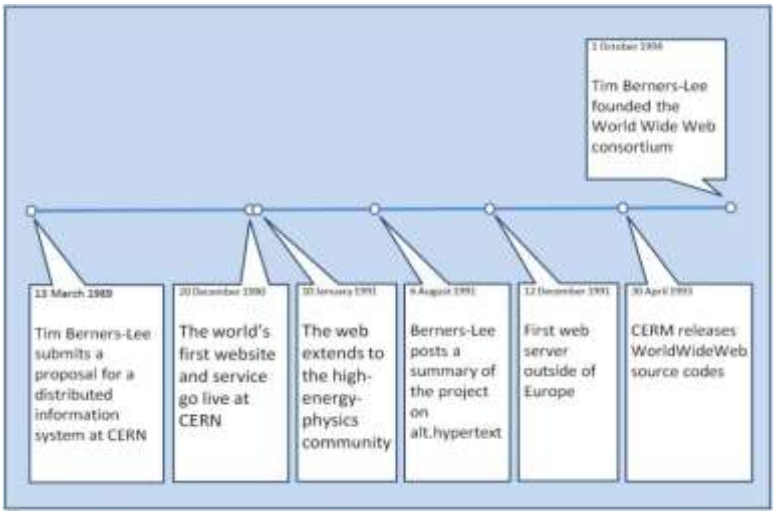


Figure 2-3 The birth of the World Wide Web (Source: CERN, 2014; Veen, 2001)

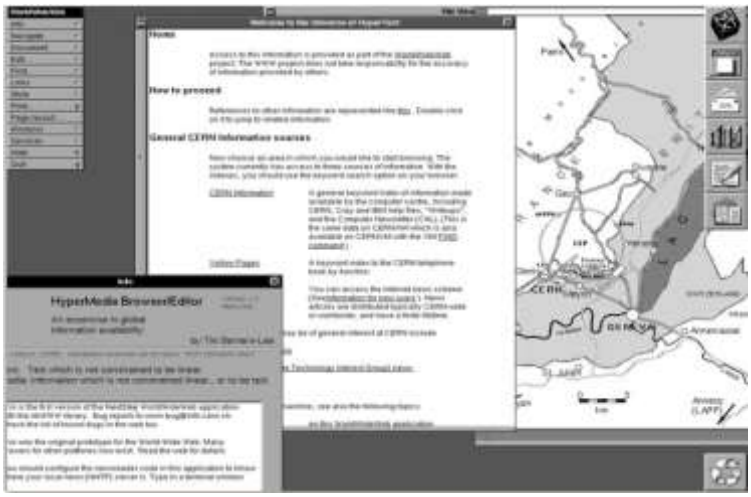


Figure 2-4 A screenshot taken from a NeXT computer running Tim Berners-Lee's software, taken in 1993
(Source: info.cern.ch)

Prototype software for a simple web system was established in December 1990, as shown in Figure 2-3. An interface was applied to the CERN computer centre's documentation to support its adoption; Figure 2-4 shows an example of the interface of the original World Wide Web browser on a NeXT computer (CERN n.d.). In December 1991, the first web online server launched in the United States. The source code of the World Wide Web was made available as free software, on a free right-to-use basis, by CERN by the end of April 1993. By the end of 1993, there were more than 500 recognised web servers, and the WWW saw an increase of up to 1% in internet traffic, which was a large increase at that time. 1994 was called the "Year of the Web". Within the same year, CERN held the First International World Wide Web conference (Home.cern, n.d.). By the end of November 2015, there were more than 3,366 million internet users worldwide (Internet World Stats 2015).

2.3.3 Web 2.0 and social media

Web 1.0 was fundamentally about reading information only. It was a constant and slightly one-directional web. Organisations could provide brochures, manuals and catalogues to present their products or services using the internet, and people could read them and contact the organisation if they wanted to. In fact, the brochures, manuals and catalogues were promoted simply on printed advertisements such as printed posters, magazines and newspapers. Business owners added shopping carts to their e-commerce websites in several forms and styles (Aghaei et al., 2012). The main aim of the websites in Web 1.0 was to present the publications and information and

make these available anytime for anyone and to develop a web presence (Aghaei et al., 2012).

Human communication through smart electronic devices, now known as computer-mediated communication (CMC) technology, was the precursor to Web 2.0 tools, which have increased in use since 2004 alongside the level of development of the internet (O'Reilly, 2005; Harrison and Barthel, 2009). Web 2.0 tools and their implementation created more effective engagement between people, groups and organisations, very interactive websites and applications and substantially more direct, reactive and user-to-user interactions than had been seen to date on the web. This interaction results from the Web 2.0 sites and applications allowing less technologically experienced users to create and participate in their own media experiences and broadcasts, such as, for example, on social media sites and applications. These sites and applications can gather collaborative media and involve a huge number of users, as in sites such as Wikipedia (www.wikipedia.org), Amazon (www.amazon.com) and Digg (http://digg.com) (Cormode and Krishnamurthy, 2008; Harrison and Barthel, 2009).

The Web 2.0 concept is simply the "read-write web", as defined by Dale Dougherty in 2004 (Aghaei et al. 2012). The birth of the concept of the Web 2.0 started with a brainstorming session between Tim O'Reilly and MediaLive International in a conference in 2004. The technology of web 2.0 permits the gathering and managing of large international groups of people with mutual interests in social interaction who can share information (O'Reilly 2005; Aghaei et al. 2012; AlAdailah 2015). Since then, the term web 2.0 has visibly taken hold and spread worldwide (O'reilly 2007; AlAdailah 2015).

When professionals had just started thinking that they had full awareness and control of the internet, they straight afterwards faced a technological revolution of the web 2.0, with new technologies emerging that changed the initial web cultural principles, and innovative practices, effectively making lots of managers powerless (Berthon et al. 2012). The 21st century has seen both threats and opportunities in this field. Organisations face a connected and dynamic universal climate. As such, organisations need to take into account the challenges and opportunities afforded to

consumers through Web 2.0 and social media, and the moves that should be made in response in terms of value, ability and actions (Berthon et al., 2012).

Social media has been developed for the purpose of public social interaction through communication applications and tools which are easily and widely accessible. These applications and tools have been designed for the web, taking into consideration features of the ideological and technological grounding of Web 2.0 that allow the development, distribution and participation in user-created content, thereby generating a different kind of user and web presence; this means that these new media enable the potential development of content by the consumer (Carvalho 2012). The technique of developing the content of the web has changed via this new media. Rather than being passive consumers, internet users now are creative and effective participants by sharing their thoughts, experiences and knowledge with others (Carvalho, 2012; Cvijikj et al., 2012). Before embarking on a deeper examination of social media, Web 2.0 should be briefly introduced.

Judging whether a website should be classified as Web 1.0 or Web 2.0 can be a difficult task. It is not enough for the website to be active, have new features or to have been recently redesigned, if it does not involve the effective involvement of users. It is especially difficult to judge due to the fact that there is no visible version label or specific upgrade procedure as is the case with an application or computer software. Some websites are easier to classify than others, such as social networking sites. Due to their social networking objectives, these sites originally considered users as premium objects (Cormode and Krishnamurthy, 2008). For example, Amazon.com began as a Web 1.0 site in the mid-1990s and step by step they have added Web 2.0 features over time. At the current time, users' ratings and reviews lead to the perception of added value for particular items. Each item has a wiki page linked to it and user profiles are available, but social features like friends and likes are limited (Cormode and Krishnamurthy, 2008).

However, the main distinction between Web 2.0 and Web 1.0 is that anyone can be a content developer in Web 2.0, and many technological platforms have been developed to encourage and maximise the number of content creators. In Web 1.0, on the other hand, there were only a small number of content creators and the rest of the users were consumers of the content. Web 2.0 is based on developing a large number of

specialised groups (friends or collections) who can exchange any kind of content (video, audio or text) and comment, link, and tag both the same group and other group content. One of the important features of Web 2.0 is the ability to mix and combine different kinds of content in novel forms (see Table 2-1). Therefore, there has been a considerable growth in internet traffic as a result of the dramatic growth of the deployment of Web 2.0 sites (Cormode and Krishnamurthy, 2008; Mata and Quesada, 2014).

Table 2-1 The difference between Web 1.0 and Web 2.0

Feature	Web 1.0	Web 2.0
Metaphor for the Internet	Information	Platform for interaction
Metaphor for the WWW	Web of information resources stored on a global network of servers where what matters is retrieval and display	Human web where what matters is human content and relations between individuals
Major sites	Information portals	Online social networks
Tools	Oriented to display and retrieve information stored on the Internet	Designed to enable collaboration and content creation on the Internet
Strategy pursued	Efficiency	Effectiveness
Economics sought	Economics of scale	Network effects
Software used	Software as a product	Software as a service
Computing model	Client-server	Cloud computing
Communication range	Wide and local area networks	Mobile communication also considered
Issues	Technological	Social

(Source: Scielo, 2014)

2.3.4 Social media platforms

Social media is a form of media which enables online social interactions. It takes different forms, including video and photo sharing, wikis, podcasts, blogs, social bookmarking, virtual media, and social networking sites (SNS). The flexibility and speed at which social media can be customised gives organisations the opportunity to increase their use of multi-way communication through supporting efficient participation in social media by both themselves as organisations and their audience. However, practical use of social media needs both time and involvement. If accounts are established but are not

administrated or content is not created, the public will soon lose interest and their participation will become negative at best (Chan, 2008; Fletcher and Lee, 2012).

There seems to be ambiguity between academic researchers and users as to how exactly organisations should include social media, and how social media varies from the related concepts of Web 2.0 and user-generated content (UGC) (Kaplan and Haenlein, 2010). However, as mentioned in section 2.3, social media is defined as "a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (Bahashwan 2012; North & Fin 2011; Ok 2011; Cvijikj et al. 2012; Nekatibeb 2012; Nea Shanea 2011; Berthon et al. 2012; Welzer et al. 2011; Peters et al. 2013; C. Gibbs 2013).

Within this general definition, there are many types of social media that necessarily need to be classified. Many people would likely accept that Facebook, YouTube, Second Life, and Wikipedia all form part of the huge body of social media, but there is no methodical technique through which various social media platforms or applications can be classified (Kaplan and Haenlein, 2010). However, many other authors, such as Fred Cavazza (2012) and Brian Solis (2013), argue that there have been attempts to create a methodical technique for the categorisation of social media (Cavazza 2013; Solis 2013). Also, new sites are developed on the internet every day, so it is important that any classification plans to consider that new platforms or applications might be coming at any time (Kaplan and Haenlein, 2010).

The role of social media to enable interaction between people and organisations has often been structured in terms of "interested", "following" and "friending" (Kidd, 2011). Figure 2-5 shows 62 notable Web 2.0 applications and platforms, focusing on two main dimensions: content sharing to filtering/recommendations; and internet applications and platforms to social networks. The four areas that arise at the cross-over of these four dimensions are tagging/rating; components/widgets; recombination/ aggregation; and collaborative filtering. Collectively, these comprise the major landscape of Web 2.0 (Dawson 2007).

Figure 2-5 Web 2.0 landscape
(Source: Network, 2013)

The most widespread method to share user-generated content (UGC) is via social media, where text, videos, photos, news, and other forms of content are made public or semi-public through a number of fixed methods (Ellison & Boyd 2007; D. Evans 2010; Fletcher & Lee 2012). The features of social media have inevitably affected communication possibilities as social media expands the opportunities for a greater degree of interaction and more personalised forms of communication (Fletcher and Lee, 2012). According to Forrester Research (Kaplan and Haenlein, 2010), about 75 per cent of internet users use social media to share evaluations on shopping websites, to read blogs or to connect to social networks. The growth in social network users is not limited to a specific age group, nor to a particular gender; social networks are increasingly populated by spectators, and critics (Aggad 2012; Brenner & Smith 2013). Therefore, it is sensible to say that social media represents a modern revolution that should be of benefit to people and organisations working in online networks (Kaplan and Haenlein, 2010).

The first recognisable social network site was launched in 1997 and was called SixDegrees (Kaplan and Haenlein, 2010; Ok, 2011). SixDegrees.com was actually the first website to integrate features such as allowing users to build their own profiles, build a list of friends and browse the Friends lists, which was a feature used previously on other sites. For instance, Classmates.com allowed their members to meet with their friends and browse the networks of other users as well. IQS and AIM also supported building

lists of friends and messaging and chatting with them, although those Friends were not visible to others (Ellison & Boyd 2007).

Social media platforms have launch dates and many of them have shut down. For example, in the case of SixDegrees, millions of users were attracted to SixDegrees.com and it promoted itself as a tool to help people to contact each other. The SixDegrees founder thinks that it closed in 2000 because it was ahead of its time (Weinreich, 2006), featuring at a time when most users did not have many online networks of friends (Ellison and Boyd, 2007). Figure 2-6 shows the lifetimes of social media platforms.

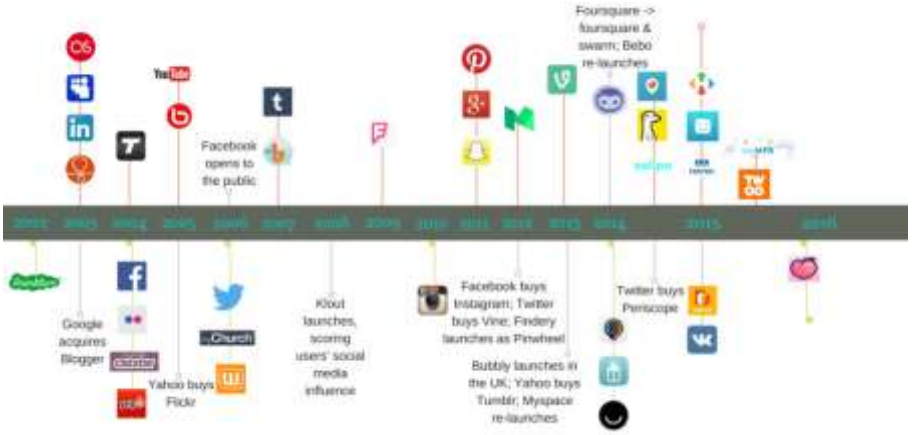


Figure 2-6 Lifetimes of social media platform sites
(Source: booksaresocial.com)

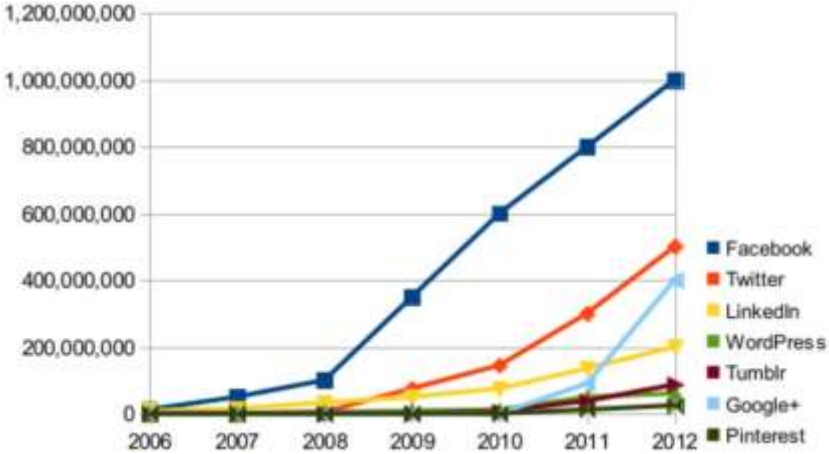


Figure 2-7 Growth of popular social media platforms
(Source: White, 2013)

According to Adrienne and Moon in their investigation in 2012, out of 13 social media sites, Facebook, Twitter and YouTube are used most often (Marketo, 2012; Leung et al., 2013). Facebook was used by 94 per cent of respondents, followed by Twitter (70 percent), and YouTube (56 percent) – see Figure 2-7. Social media platforms and their

popularity could differ from one country to another. The next section will discuss the internet and social media in Saudi Arabia.

Another important issue relating to social media platforms is, each of social media platform has some individual design elements that have to be considered when using the tool. For example; visual branding, colour scheme used, brand fonts and photos and filters (Kitschke 2014). These elements could vary from one platform to another and have to be taken into the consideration when using the platform.

2.3.5 The internet and social media in Saudi Arabia

The internet, without any argument, is one of the fastest growing technologies the world has ever seen (Mirza, 1998; Chai et al., 2009). Taking this into account, one wonders why some countries have not yet taken full advantage of this modern technology. In some specific Third World countries, the financial conditions and shortage of infrastructure and technological progress means that it is not a priority concern at the present time. In the KSA, there is no monetary shortage or technological lack of knowledge or infrastructure.

The Saudi Arabian government spends large sums of money in providing its residents with the latest technology, resources and services available in the modern world (Mirza, 1998). The internet was officially made obtainable in the KSA in 1997 (CITC, 2009). Spending over 40 per cent of regional IT resources has made Saudi Arabia the biggest Information and Communication Technology (ICT) market in the region (Alotaibi, 2013). Saudi Arabia is fully on the way to building an information-based community. Starting with the opening of the telecoms market to competitors with applying a strategic guide frame from the government, these improvements have placed the KSA among the rapidly growing ICT markets in the region (CITC, 2009). It is also considered as the leading country among Arab countries in broadband speeds with speeds of up to 3.53 Mb/s and as one of the fastest growing internet markets – the 64th fastest growing worldwide (Askool and Nakata, 2010; Kassar, 2010; Askool, 2013).

Online social communities, in particular, became widespread from the start of 1999 when Saudi Arabians obtained access to the internet (Al-Saggaf et al., 2008). Social networks are expected to play an essential leading role in different parts of Saudi society

(Askool and Nakata, 2010) as social media in particular, and the internet in general, perform a role in propelling social changes naturally (Dubai School of Government, 2012; Samin, 2012). These changes have contributed to the predisposition towards movements of what is called the “Arab spring” (Ghannam, 2011; Dubai School of Government, 2012).

On the other hand, the Saudi Arabian government practises a tight rein over internet usage in the country. They block all anti-Islamic or pornographic content, or content which criticises the country, the Royal Family, or other Gulf states (Al-Saggaf et al., 2008); this could be the fundamental reason for the lateness in the adoption of the internet in the KSA (Mirza, 1998).

Islamic culture plays a fundamental role in Saudi Arabia. This is because the Saudi community has longstanding elevated religious values. They believe that Islam is not only a religious ideology, but it is an inclusive style of living that affects the whole way of life. Therefore, the government apply many forms of censorship and ban anything they feel could be socially unwholesome and against the teachings and morals of the Islamic religion. The internet, especially Web 2.0 and its applications, has become a form of media- gate which spreads access and interact with several kinds of data and knowledge that is hard to police (Mirza, 1998; Al-Saggaf, 2004).

The survey done by Askool (2013) showed that the communities in Saudi Arabia have very good knowledge about social media and social networking sites, where users can participate their ideas, information and experiences and write comments on each other’s profiles. More than 80 per cent were knowledgeable about these terms and just under 20 per cent were not familiar. In addition, the survey showed that people in Saudi Arabia usually refer to social media using brand names like Twitter and Facebook instead of the generic names (Askool, 2013). Figure 2-8 shows the awareness of users in Saudi Arabia of these terms according to age groups. These partly match the global percentages presented by the Pew Research Center (2014) shown in Figure 2-9.

Moreover, it is common for an individual in Saudi Arabia to have more than one social media account. For example, it is widespread practice for a person to have a profile in two or three or maybe more social media sites, with particular focus on one of these accounts.

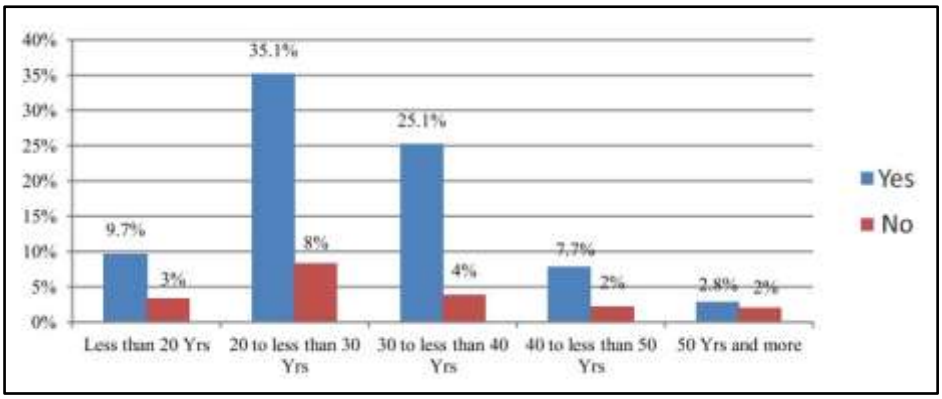


Figure 2-8 Awareness of social media and social networking site terms according to age groups in KSA (Source: Askool, 2013)

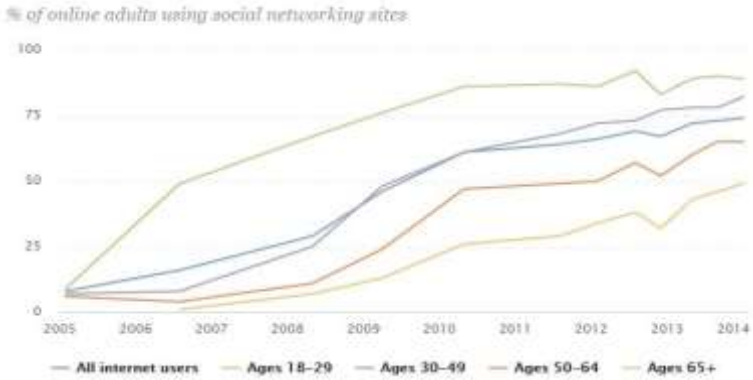


Figure 2-9 The percentage of online adults who used social networking sites in 2014 (Source: Pew Research Center, 2014)

All responsibilities for coordinating internet services were assigned to the King Abdul-Aziz City of Science and Technology (KACST), which is an organisation that directs and funds several types of research within Saudi Arabia. They are also the manager of the top-level domain (TLD) ".sa". KACST instructed the Saudi Telecom Company (STC) to work carefully to set up a suitable network structure in the country to enable fast and constant internet access for the whole country (Mirza, 1998), as seen in Figure 2-10.

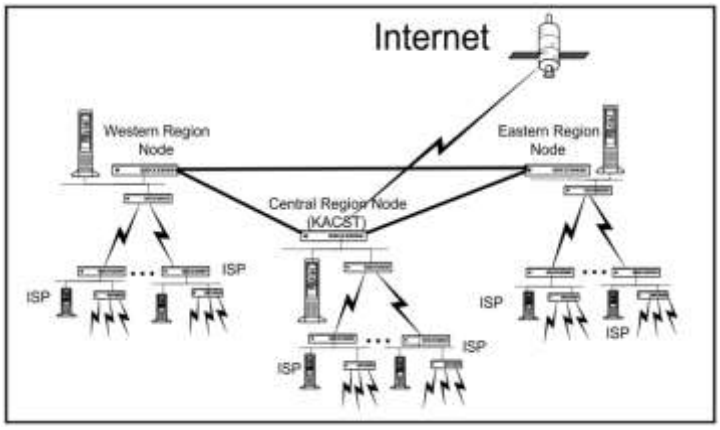


Figure 2-10 Initial planned internet network in Saudi Arabia (Source: Mirza, 1998)

2.3.6 Museum web and social media presence

In the last century, museums have been subjected to a number of transformations in terms of practical, functional and conceptual aspects. These facts have increased museums' communication skills. The revolution of the development of the internet and its correlation with new technology has proved its ability to establish and globalise the use of a collection of social media tools, and to build strong relationships between different organisations and their audiences. However, dealing with Web 2.0 requires a significant shift from unidirectional communication to multi-directional communication and participation. This will affect museums' communication strategies and policies, which should need to take into account digital aspects and consider the level of confidentiality associated with these aspects (Martínez-Sanz, 2012). Through the ubiquitous application of Web 2.0, more active and instant online environments can be engineered by a museum, with the extra benefit of the visitor being able to re-visit the conversation any time according to their own schedule and location. A museum's web presence, as it is a cultural organization, targets and engages directly with several groups of audiences, including different age group, gender, ethical and background (Abuhamdieh et al. 2002; Thackeray et al. 2008).

Museums have different ways of framing their experience and practices. They can present actions and reactions through comments, contributions, ratings and even through subscribing to other accounts (Russo and Peacock, 2009). It is a fact that museums should be self-motivated to take advantage of the world of Web 2.0. This can be possible only if museums take a step out into the world to the spaces where people are gathering together and participate in their dialogue and make them aware of and interested in what museums are offering. This is especially unavoidable in the Web 2.0 internet-connected communities where people are converted from viewers to active dynamic participants and the virtual space becomes a social place (Liu and Bowen, 2011; Gu, 2012).

It is difficult for a museum to be successful and it could cease to survive without active connections with visitors, volunteers, and donors. To make this situation worse, as a consequence of the economic downturn, sources of museum revenue such as public funding from tax revenue, corporate sponsorship, endowment funds, foundation grants,

and even people's philanthropy as well as visitor numbers and purchases have reduced while museum expenses have increased (Ellis, 2003; Kaufman, 2009; Solnik, 2009; Vogel, 2008; Fletcher and Lee, 2012). Therefore, it is particularly important for museums to take advantage of the relationship creation features of Web 2.0 and social media, for use with the existing audience and to develop a new audience (Black, 2005; Fletcher and Lee, 2012).

Museums now are increasingly feeling the stress to react with the modern tools provided by Web 2.0 and social media for communicating with the active audience. Subsequently, it is important to understand the impact of Web 2.0 and social media on museums and how they can take practical action towards integrating social media into museum strategy (Fell, 2012). Social media features and technologies are already being harnessed through mobile producers and active users of social media messages, media and other content (Jenkins, 2006; Mainsah and Morrison, 2012). They also give museums the opportunity to enhance the accessibility of cultural experiences in both aspects of local focus and also global reach and distribution (Gu, 2012). In addition, significant material can be distributed through social media which allow multi-directional communication between curators, artists and visitors (Cox, 2011).

Although museums are concerned about becoming more energetic and active on social media, they are required to make sure they are strategic in their procedure. The initial stage in this mission is being able to come online (Meltwater Group, 2013). After that, they can start to obtain a deeper online vision; they may look towards developing their web presence in order to attract more visitors and increase interaction with their exhibitions and events (Meltwater Group, 2013). Web 2.0 and social media are beneficial tools for linking museums with audiences in several forms in addition to the use of traditional methods; these tools provide a unique opportunity for collaboration building, in accordance with a visitor-centred perspective (Gu, 2012). By following this procedure, museums are capable of knowing what visitors were thinking and feeling about their exhibitions and how to interact better with their audience (Meltwater Group, 2013). As Mainsah and Morrison (2012 p2) note, "social media are always about means and modes of engagement and exchange".

According to Fletcher and Lee (2012), American museum professionals believe that social media is boosting the ability and extent of communication efforts with the museum audience. They believe that becoming involved with social media is important to communicate with the museum audience. Fill (2012) adds that it is usually viewed as a method to connect with teenagers too, which is beneficial for engaging with a new group of people and is one of the advantages of using social media. This statement has been emphasised by a research study done by Schoder and Drotner (2013) with 196 museum visitors in Sydney. This study showed that museum visitors are more active on social media than non-visitors.

2.3.7 Museum web and social media presence in Saudi Arabia

Despite the potential of the web and social media, museums in Saudi Arabia are still using the old traditional methods to deliver and promote information to their audiences (Hamed and Higgett, 2014). One of the major challenges for people who run museums in Saudi Arabia is the lack of knowledge of how to reach their audience (ALHotan, 2014). Museums in KSA are still far away from using the internet to promote themselves (Hamed, 2015). Hamed (2016) mentioned in his recent research that there are just a few museums taking advantage of the internet out of about 140 museums in the whole country (see Appendix : A). Five museums have or used to have a website, and only a hand full have or used to have a social media account (Hamed and Higgett, 2014; Hamed, 2015).

Of course, using Web 2.0 and social media supports the development and sustainment of communities of interest around the museum (Grabill et al., 2009; Gu, 2012). However, museums do not become digitally and physicall engaged and sustain this engagement just because they have a blog, Twitter account, YouTube channel or a Facebook page (Alexander et al., 2006). Museum staff in Saudi Arabia need to understand that using social media is perhaps one of the easiest and cheapest methods of promotion and it will add great value to marketing activities (Kidd, 2011).

While many museums have established their web presence, including use of social media, relatively little formal research has been done on its actual use in the particular context of museums (Kremer, 2013). In addition, there is a great lack of

research on the subject of museums' use of the internet and social media in Saudi Arabia (Hamed, 2016), which is discussed in the limitations in section 9.8.

2.3.8 The goal of the web and social media in museums

Many museums have not yet set their goals regarding the use of social media. Fletcher and Lee (2012) in a survey on American museums found that only 32 percent of respondents indicated that they have set specific goals or objectives for the use of social media in their museums. Many communications experts and professionals have focused on the importance of setting goals in order to be able to evaluate efficiency when they were asked how museum websites and social media could be used effectively. These goals have to be measurable, such as visitor numbers and purchases. Other goals might also relate to the fact that more people in the museum should share their knowledge through social media platforms.

The internet and social media tools have a local target audience and value and, at the same time, have international reach and distribution (Mainsah and Morrison, 2012). Social media can be considered as a marketing tool for museums to promote their events, exhibitions and new collections to encourage people to visit the museum. It is also a great tool for a museum to spread knowledge and keep people updated about what is happening there, which also attracts more people to visit the museum (Fell, 2012).

Instead, websites and social media are mainly counted as digital marketing tools for museums, working in parallel with traditional marketing methods such as printed advertisements, radio and television (Gu, 2012). Social media was regarded as being an important part of the ongoing cycle of engagement that connects the audience and the museum with on-site visits and the community experience beyond the physical museum space (Gu, 2012).

There are other goals for social media in museums. The interviewee in Mini Gu's thesis (2012) explicitly stated that for an institution like a museum, the goal of social media was more than free advertising: driving attendance is of course one of the things it can achieve. But it should not be the number one reason for using social media. If someone uses it only to drive internet traffic to the museum, they are using it for the wrong reasons. It is more about extending visitors' experience of a 21st-century

museum. It should help to connect and extend their experience. The overall interview resource reflects the fact that social media makes the relationship between the museum and the audience more conversational. The museum should consider social media as part of becoming a more open and relevant institution in the new cultural scenario to create online communities (Gu, 2012).

2.3.9 Measurement of patronage in museums

The effectiveness of social media cannot be evaluated without first setting definable goals and the selection of criteria for measuring progress towards those goals (Bensen and Parker, 2009). As many organisations are just starting to utilise social media, it is unknown how many organisations have prioritised establishing methods of measurement and evaluation for their social media implementation (Fletcher and Lee, 2012). It is very difficult to calculate the financial value of social media for a museum or organisation as this monetary value is based on how each specific museum or organisation determines its social media success (Fletcher and Lee, 2012). Nevertheless, although this kind of connection is not easy to prove, museums should set goals that can be measured (Fletcher and Lee, 2012).

For example, the Wexner Centre for the Arts identified several aims of social media use. The first is to bring people to the Wexner Centre to experience the arts. The second is to increase awareness of programmes and to engage with visitors. The third is to build a community. The Wexner Centre further elaborated that the success of social media was not necessarily directly dependent on physical attendance (Nosen 2009; Gu 2012).

The strongest motivation behind using social media is to engage audiences (Gu, 2012). This idea about not just grabbing audiences has resulted in a lot of arguments. The Digital Communications Manager at the Columbus Museum of Art was in agreement with the Director of Marketing and Communications at the Wexner Centre and articulated that the main reason for supporting social media implementation was to engage audiences (Nosen, 2009; Gu, 2012). However, many others say that increasing visitors through the door is one of the main objectives (Meltwater Group, 2013). Michael from the Australian Museum web team (2013) notes that “While we aim to provide a great online experience for everyone near and far, we also want to get as

many people through the door as possible". He added that increasing visitor numbers is one of the museum's primary objectives (Meltwater Group, 2013).

One possible way to measure the success of engagement with social media is calculating the interactions between the museum and the audience. Online engagement is considered as a measurement tool of the success in online marketing (Meares, 2014). However, the number of responses is not the only indicator of successful engagement. Most of the engagement efforts on social media are difficult to translate in tangible terms. For instance, one practitioner discussed a post on her foundation's upcoming sailing classes, "We are excited about sailing season; come find a class that you like", which 16 people 'liked' on Facebook (Exploratory et al., 2010, p.66). However, she was unable to determine whether the people who clicked 'like' actually ended up enrolling for a class or not. Offering discounts at the front desk to those who claim to have seen the promotion advertised on a social media site can in principle help create a measurable link, but the truth is that there is no way of knowing whether a patron mentioning the discount has actually seen it online or heard about it by word of mouth. This obviously will not work either if the museum offers free admission (Exploratory et al., 2010; Fletcher and Lee, 2012). But the lack of a visible index does not mean that it is not worth doing (Gu, 2012). As mentioned in section 2.3.7 above, museum visitors are more active on social media than non-visitors.

Adrienne Fletcher and Moon Lee (2012) found that 61 per cent of American museums use at least one measurement tool. Museums usually take measurements either monthly or quarterly and then make adjustments to their social media efforts accordingly. According to Fletcher and Lee, the tools being used most often by American museums are Facebook Stats, Google Analytics and Google Alerts (Fletcher and Lee, 2012).

The Wexner Centre uses Google Analytics and the built-in analytic feature of Facebook to get quantitative measurements of social media activities. The tracking systems provide information on the number of clicks and the time that readers stay on each single post and the web traffic trends over a week, month, or another time period. The Wexner Centre analyses the numbers in reference to related content to find out the most effective way to solicit audience responses (Gu, 2012). The Columbus Museum of

Art (CMA) in Columbus also uses analytics to track the performance of social media and to test out the key words that work most effectively to engage the audience (Gu, 2012).

2.4 Internet infrastructure

At the beginning of the 21st century, the internet became one of the challenges facing people in the KSA as it has been one of the key developments driving and extending globalisation in the 20th and 21st centuries (Alrawabdeh, 2009). Connecting to the internet has become the main way to obtain data via the information superhighway, and it is an important and crucial element for communication and connections for many people in modern countries to connect in their everyday lives. Therefore, a recent argument is that internet technology is significantly transforming most practices and functions (Beynon-Davies, 2005). The requirement for electronic service delivery for the public has been influenced by the need to deliver services to citizens using the internet (Al-Sobhi et al., 2009). As Pan et al. (2006) assert, all organisations can increase their services, interactions and customer satisfaction using the internet.

Many governments in developing and developed countries have developed web portals to present digital services to people outside and within their organisations (Chen et al. 2006; Lam & Lee 2005). Since the late 1990s, the KSA, as a developing country, has started, among other countries, to deliver the internet, build its web presence (Al-Tawil, 2001; Kostopoulos, 2013), increase its web productivity (Norris and Moon, 2005) and, of course, to secure competitive features as well (Noh, 2002; Dillon et al., 2006). The government also set a target to link the local authorities with different government departments (Silcock, 2001; Al-Sobhi et al., 2009).

However, it is interesting to note that there are differences in implementing, adopting and using the web between governments at the national and international level, such as transactions between the government and other businesses and other government constituents, which also applies to Saudi Arabia (Moon, 2002; Heeks, 2005). These differences can be assigned to reflecting the requirements of the individual countries, their readiness, state (Lam and Lee, 2005), size, structure and culture (Besselaar and Koizumi, 2005; Al-Sobhi et al., 2009).

2.4.1 The importance of the internet infrastructure

The internet and social media and how they are used in any country is determined by a few aspects relevant to the country, including the infrastructure enabling the internet and the social media, and the government's laws and regulations (Berthon et al., 2012). The ICT infrastructure is a central issue to take into consideration when establishing the development of the internet and social media in any country (Björgvinsson et al., 2010). Therefore, governments have to ensure that the infrastructure is in a capacity large enough to support and handle internet traffic (Björgvinsson et al., 2010). Governments in the 21st century have to ensure that all organisations, businesses, schools and homes have fibre optic technology or good quality internet access as an essential infrastructure, just as highways were essential in the previous century (Arora, 2012).

As the government of the KSA believes that e-learning, e-commerce, e-business and e-government have become essential elements, the improvement in the ICT infrastructure as a basis of these elements will positively affect the government departments and organisational processes (Al-Sobhi et al., 2010). The establishment of a good quality IT infrastructure is where the challenge lies for the Saudi Arabian government (Al-Sobhi et al., 2010).

2.4.2 The state of the internet infrastructure in Saudi Arabia

The study carried out by Abanumy and Mayhew reported in Al-Sobhi et al. (2009) showed that there was a lack of internet infrastructure in Saudi Arabia, and as a result of that, there is a lack of web presence for its cultural organisations. However, Al-Sobhi et al. (2010) found that essential improvements have been undertaken in Saudi Arabia; for example, from 2003 to 2005, the number of Saudi Arabian ministries which had a website increased from 13 to 18; in 2007, this number reached 20 ministries out of 22 ministries (Al-Sobhi et al., 2010; Abanumy et al. 2005).

The information technology infrastructure has grown in Saudi Arabia and, as a result, it is now regarded as the largest ICT market in the region and accounts for over 40 per cent of regional IT expenditure. With this spread of IT and ICT services, Saudi Arabia has improved the quality of its ICT infrastructure and public awareness about the

internet (Alotaibi, 2013). The capacity and the speed of international internet connections in 2013 reached speeds of up to 814 gigabytes per second compared to 318 gigabytes per second in 2010 (CITC, 2013).

The Communication and Information Technology Commission in the KSA (CITI) aimed to provide a high-quality ICT service across the whole country for a fair price. They developed a Saudi centre for internet information to provide domain registration on the internet and to help users manage the service easily and quickly. CITI also developed a new method to measure the service quality and customer satisfaction and to take appropriate action based on that information. CITI started to improve and upgrade the capacity of the internet protocol from Internet Protocol version 4 **(**IPv4) to Internet Protocol version 6 (IPv6) (CITI, 2013). IPv4 uses 32-bits of recombined digits with a maximum of 4.3 billion possible addresses, which makes it run out of addresses quickly. Therefore, the new IPv6, which is used across the world now, addressed the limitations of IPv4. IPv6 uses 128-bits instead of 32-bits for its addresses, creating 3.4 x 10^{38} possible addresses. These trillions of new IPv6 addresses will meet the internet demand for the foreseeable future (Ali, 2012; World Telecommunication/ICT Policy Forum, 2013). This may contribute to keeping the high-speed internet infrastructure up to date in Saudi Arabia.

The spread of fast internet connections in Saudi Arabia resulted in about 45 per cent of houses and about 47.6 percent of people in the Kingdom having such connections in 2013. The ICT services covered about 98 percent of all localities, including all cultural organisations in the country. The number of people using a high-speed internet connection has increased significantly in Saudi Arabia over the last few years; for instance, only 5 per cent of people were able to use such connections in 2005 compared to the latest figure of more than 55 per cent (CITI, 2013). There were about 16.5 million internet users in the country by 2014 (CITI, 2014). The CITI is expecting this figure to keep growing in the next few years as the number of smart phones, apps and social media users increases (CITI, 2013).

There are many elements that have promoted the increase in the number of high-speed internet users in Saudi Arabia. The number of smart phone users in the country is increasing rapidly, as it is worldwide; these phones require high internet

speeds and a large amount of data (CITI, 2013). According to Global digital statistics 2014, 31 percent of KSA total population are smart phone users (We are social 2016). Also, the competition between the smart phone companies, app developers and the great advantages they present encourage people to use smart phones more frequently (Heggustuen, 2013). In addition, the internet is a large investment for companies in Saudi Arabia. For instance, the direct internet income in 2013 reached about 75 billion Riyal, which represents an increase of about 10 per cent from 2012. The total investment in ICT in the country was about 102 billion Riyal in 2013. Also, the growing extent of installing high-speed fibre optic broadband (FTTx) has played a significant role in increasing internet usage in Saudi Arabia.

2.4.3 Barriers to internet use in Saudi Arabia

As mentioned in section 2.3.5, King Abdul-Aziz City for Science and Technology (KACST) controls the internet service in Saudi Arabia and any kind of connectivity must be carried out through this organisation (Sait et al., 2003). It represents the international gateway of the internet in Saudi Arabia and is also responsible for many other duties such as filtering internet content, providing ISP qualifications and licences, providing internet services to ISPs and universities, and domain registration (Al Zoman, 2001). The internet filtering process aims to make sure that the content is suitable for the Saudi society (Sait et al., 2003).

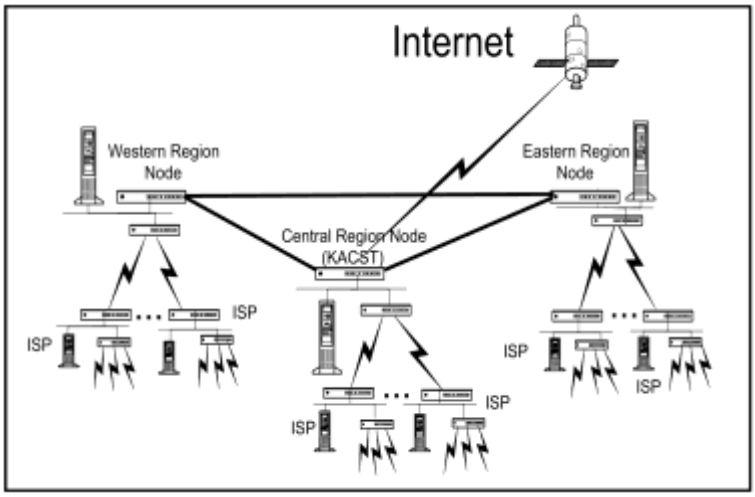


Figure 2-11 Initial planned internet network in Saudi Arabia
(Source: Mirza, 1998)

The KSA is a country that has deep support for strong cultural and religious values. Therefore, there are a few restrictions forbidding any material viewed as being socially and morally harmful and against the teachings of the Islamic principles in the country (Mirza 1998; Al-Saggaf 2004). Many international debates and discussions have focused on the positive and negative effects of the internet on the Saudi Arabian community.

One of the fundamental unfavourable effects that has been raised is the potential ideological and moral corruption of the younger generation as a result of exposure to prohibited materials that are not accessible normally within the country (Mirza, 1998). Therefore, any materials that are deemed to contain pornographic or are anti-Islamic, or which contain criticism of the government of Saudi Arabia, the Royal Family, or other Gulf states, are blocked (Al-Saggaf et al., 2008). Once KACST is aware that any particular internet address contains prohibited content, the address is added to the blocked list (Al Zoman, 2001).

There are some other barriers for internet use in Saudi Arabia, including language. Most Saudi people do not speak English. In addition, in small towns and communities, low-speed internet connections may be another barrier (Alrawabdeh, 2009).

2.5 Marketing

2.5.1 Traditional marketing

Traditional marketing employs traditional media methods like television, radio and printed advertising to transfer its message to the target audience. All types of advertising, including promotion and campaigning, that have been in use for a long time and have been proven successful, may be involved in traditional marketing (Nekatibeb, 2012). Traditional marketing is used to broadcast information, attracting more and more customers to buy products or services through various methods such as newsletters, newspapers, flyers, billboards and other forms of advertising like television and radio commercials (Mirzaei and Jaryani, 2012; Nekatibeb, 2012; Salehi and Mirzaei, 2012). In 1960, McCarthy introduced the "Marketing Mix" theory by presenting traditional marketing as a mixture of useful methods and elements. Kotler et al. (2008) described the "Marketing Mix" as a "set of controllable tactical marketing tools that the firm blends to produce the response it wants in the target market". Kotler categorised this set of tools into four main groups: Product, Place, Price and Promotion, which is known now as the "4 Ps" (Nekatibeb, 2012).

Traditional marketing channels are still active and notable in marketing communications (Nair and Subramaniam, 2012), which use mass advertising to reach audiences. The principle of traditional advertising is by delivering a uniform message, in a one way process, in order to reach a mass audience from a large customer base (Nekatibeb, 2012). This method of sending marketing messages addresses both the target and non-target audience and groups. This is a wasteful method as Charles Ramond (1978) in a report published in the Journal of Advertising Research believed that traditional advertising represents a waste of advertising resources. In addition, from the marketing assumption which is based on the wants and needs of customers, this type of advertising approach is against marketing concepts (Nekatibeb, 2012), which reduces the efficiency of the advertising effect (Mirzaei and Jaryani, 2012; Salehi and Mirzaei, 2012).

Traditional advertising and e-marketing (internet marketing) have both advantages and disadvantages (Table 2-2). As an example of the advantages, traditional marketing uses many platforms, including low technology and off-line advertising, which

means no source of power is needed. In addition, some forms of traditional marketing are very low-cost methods like leaflets and brochures. As a result, they may be spread anywhere without worrying about costs or being stolen. However, e-marketing has some important advantages. This form of marketing is based on high technology systems, which create an environment for interaction with people and the community around the brand. It also has multi-directional channels which allow communication between a company and the community and people in both directions. E-marketing does not need a huge budget to run, including any real-time feedback channels.

Table 2-2 Comparison between traditional marketing and e-marketing

Basic Elements	Traditional Marketing	Social Media Marketing
Simple definition	The process of performing market research, promotion and selling products	The process of reaching out to customers through socialising, engaging and empowering a community
Platforms	Offline media such as TV, radio, newspapers, banners, magazines, fliers, outdoor ads (mass media)	Blogs, online communities, social networking and sharing sites: YouTube, Facebook, Twitter, Linkedin
Technique	Mass marketing, creating brand awareness through hard selling	Creating interaction among like-minded people around a brand
Approach	One size fits all	Customised and tailor-made as per the community interest
Focus	Advertising and branding	People, community
Customer perception	Intrusive	Inclusive and participatory
Communication channel	One-way interaction	Conversational, multi-directional
Communication style of marketing	One-to many, company to consumers	Many-to-many, company with communities and among community members
Marketing Mix elements	Product, Price, Place and Promotion	People, Platform, Participation and Promotion
Return on investment	Return on implementation	Return on influence
Required budget	Huge budget needed	Minimum budget needed
Feedback handling	Not feedback friendly due to the communication style used	Provides a real-time feedback handling opportunity

(Source: Nekatibeb, 2012)

On the other hand, both traditional and internet-based marketing suffer from many disadvantages. For instance, traditional marketing is mostly based on the idea of a "one-size-fits-all" approach towards its audience and it operates on the basis of one-way interaction, from the company to customers. It needs a huge budget to achieve a satisfactory campaign.

E-marketing also has some disadvantages. It is based on a high technology platform in addition to the internet, which means it needs a source of power and it is difficult to provide security for the equipment as it may be stolen or damaged. In addition, it mostly focuses on advertising around the brand, aiming for a return on influence and not directly on implementation, unlike traditional marketing (Nekatibeb, 2012).

Nowadays, online marketing has the biggest proportion within marketing agencies and marketing plans. A 2016 statistics report shows that traditional marketing had lower spends in 2015. 38 percent of marketers planned to move to online marketing, as 72 percent of agencies believes that online video advertising is as influential as television advertising if not more (Moore 2016). Though online marketing has improved in the last decade as a cost effective marketing method and it is now the master of the marketing industry, it is still important to integrate online marketing with traditional marketing (Ctsang n.d.).

However, both traditional and digital marketing should be used together in synergy to bring about the best results. Traditional advertising may push people to be more engaged with online marketing and this can lead to the campaign having a better outcome (Nekatibeb, 2012). Although traditional marketing communication channels are still active and prominent, web presence, especially in social media, has revolutionised the way individuals and business enterprises communicate (Nair and Subramaniam, 2012). Incorporating both traditional and online marketing methods into a coherent marketing plan will attract the desired behaviour of audience and bring the most effective marketing strategies and plan (Ctsang n.d.).

2.5.2 Online marketing

Recently, marketing has been subjected to historic changes in the methods through which information is transmitted to the public (Cvijikj et al., 2012). Web 2.0 and social media tools give museum marketeers the ability to beat the one-way traditional communication through multi-directional conversation and engagement with customers (Hanna et al., 2011). As a consequence of these changes, it becomes easy to reach people anywhere in the world on the internet despite your location (The Internet

Marketing Academy, 2011); the real challenge now is how to interact with these people (Baird and Parasnis, 2011). Online marketing is not optional anymore; it is a necessary task in the current digital age (The Internet Marketing Academy, 2011). This section will discuss some of the main digital marketing channels and aspects which affect the development of the design of the theoretical framework.

2.5.2.1 Websites

Most advanced businesses and organisations in the modern age have a web presence on the internet. It is not just a profitable requirement for those businesses, but is instead compulsory for running their activities (Mirzaei and Jaryani, 2012). Having a web page also offers a business the opportunity to have an electronic branch to create an online presence and an online social community space, allowing visitor participation and interaction (Cunliffe et al., 2001).

There are many factors that may affect museum websites such as having a clear aim for the website, objectives they want to achieve, the message they want to send across and looking fresh and updated (Day, 1997; Shepard, 2011).

Updating the website frequently and keeping it fresh and up to date affects the Google ranking of the website and the search engine optimisation (mentioned in detail in section 2.5.2.F). The amount of change is also very important; for example, the impact of a big change to the main page will have a large impact compared to a small change like a sentence (Shepard, 2011). Visual People, the creative design company, suggest that a website should be updated at least once a month. They added that changes have to be made to the whole website at least once every 6 months (Visual People, 2016). The quality and relatability of the updating is also very important (Wowe, 2013).

It is very important that the website is well designed in an authentic way that creates an environment that affects visitors and treats them as normal, real, traditional museum visitors (Olney et al., 1991; Eroglu et al., 2003). The website should create an impact that increases visitors' enjoyment and curiosity and improves the perceived quality of the online experience.

Many factors, as researchers have explained, may affect the website design and consequently its quality. These factors include the domain name, design colour, font,

images and layout (Jones, 2010; The Internet Marketing Academy, 2011). These factors will have an effect on the customers' experience and their level of enjoyment (Oh et al., 2008). The website design may also affect the visitors' cognitive decision processes, influencing their behaviour and understanding of the environment of the real place (Park et al., 2008). Poor design is highly likely to have a dramatic effect on the web presence of the museum and its visitors (Nielsen, 1998).

It is beneficial to use a website checklist to support the success of the website. A website checklist could be used for a new website or for improving an existing website (Kats, 2012). The checklist would be used to examine every single element on the website and to check that nothing is going wrong and nothing has been forgotten to ensure the website represents best design practice (Raward, 2001; Jurmann, 2008). Usually, the checklist concerns different aspects of the website design and not the content. The evaluation of these aspects includes the appearance, use of colours, use of text, links, navigation, credibility and so on (Zhang and Small, 2000; Alotaibi, 2013).

The area of evaluating website design has been a prolific research subject in the past few years (Zhang and Dran, 2000). This involves different aspects, including content quality, user behaviour, usability and many more areas. However, studies specifically on the evaluation of museum websites and associated user behaviour and engagement are still lacking. Examples of studies that have focused on website evaluation and that have used a checklist approach to assess the different aspects of web presence include: Zhang and Small (1999), Gehrke and Turban (1999), Zhang and Dran (2000), Nygaard (2003), Jurmann (2008), Alfarraj et al. (2011), Susser and Ariga (2006), Park and Uribe (2008), Mebrate (2010), and Siddiqui (2014).

In addition, other reports that have attempted to address specific aspects of web presence assessment include: Raward (2001) who used a checklist designed for an academic library website, and Rowland (2014) who employed a checklist for assessing the success of charities' web presence. This gives an indication that museum web presence has received little attention, as reflected by the lack of studies in the literature with the exception of Liang (2011) who investigated the evaluation of museum websites in Macau, China. Table 2-3 below presents the literature on the main features related to website design.

Table 2-3 Website design checklist elements

Study	Web design checklist elements
Stokes (2008)	Links are distinct Menus at the top or left Logo in the top left corner Search boxes at the top Elements should be distinct and easy to find Keep consistent: menus, logos, colours and layout Information architecture should flow from broad to narrow Sitemap should be available on every page Navigation should be easy to use and should allow the user to know where they are on the site Easy to use by bandwidth users Compatible across a range of browsers Avoid heavy page loads Make content easy to reach Never build a site entirely in Flash URL should be brief and descriptive Prominent contact information Informative "About us" Keep content fresh and updated Link to credible third party references Customisable image naming and tags Design with clear goals in mind Features are genuine on each page Keep file size as small as possible, no more than 150 Kb
Park & Uribe (2008)	Purpose of the website Clear domain Clear contact information High quality images Clear and easy to read text Resizable text No more than two fonts Readability colour contrast Navigation on top left-hand side Liquid layout Compatible with multiple browsers Minimalized loading time Search feature Logical tab order Plenty of white space Not too many graphics Easy to skip multimedia Not too many links Button size The company name Consistent design Good contrast of text colour Clear, easy to understand writing
Jurmann (2008)	Logo, Tag on header Good domain name Navigation on top left or right Navigation on every page Flash-free navigation Logo and branding Attractive design Not overloaded with information Effective colour scheme Focal points Adjust the line height Readable font size Use of white space Home page should grab attention within 7-10 seconds Contact information Customer rating Allow user feedback Site map Provide text with any non-text content Minimal or no usage of Flash Regular updating Different browser compatibility Optimised page size Newsletter or RSS subscription
Meyers (2009)	Loading time Text Contrast Font size and spacing Easy to read Flash files are used sparingly Company logo is prominently placed Tagline to make the purpose clear Home page Is recognisable in 5 seconds Company information Contact information Easy navigation Labels are clear Logo linked to home page Easy site search Links easy to identify Reasonable buttons and links Major headings are clear Styles and colours are consistent Emphasis (bold… etc.) is used sparingly Ads and pop-ups are unobtrusive Concise and explanatory URLs are meaningful and user-friendly HTML page titles are explanatory
Gaffney (2011)	Clear current location Clear link to the home page All major parts accessible from the home page Sitemap if necessary Simple structure Search function if necessary Clear exit point on every page Page size less than 50 Kb All graphic links available in text form Support for all browsers Language used is simple and avoids jargon Users can give feedback Online help if necessary One word or term to describe any item Links titled with what they refer to Standard colours are used Clear layout Sufficient white space All images have text assigned Unnecessary animation is avoided
The Saylor Foundation (2011)	Easy to show current location within the site Clear link to the main page Sitemap for large complex sites Easy to use search function Important information is given prominence Unnecessary animation is avoided Group-related information Language is simple and jargon-free Links are visible Site is organised from the user's perspective Layout is straightforward and concise Easy to scan through White space is sufficiently used Colours are easily seen

Conway (2011)	Mohamadesmaeil and Koohbanani (2012)	Mohamadesmaeil and Koohbanani (Continued)	Morris & Ed (2014)
Accessible features are easy to find Prominent "Contact us" link with details Clear text resizing controls at top of the page Clearly marked homepage link on every page Homepage lists key tasks Easy to find share and community information Easy to find general information Easy to order items Simple sitemap Search feature easy to use Search results are simple to interpret Low bandwidth version of the pages is available Language translation link is available Tags presented for all images Presentation well laid out and inviting	Title and logo of the organisation put on every page Logo of the organisation visibly and distinctively shown Title of organisation put at the top of the page No misspellings or grammatical errors User feedback available Page free of ads Information content distinctive from content for fun Designating a page as a homepage Titles of pages are short Easy navigation between pages Comprehensible website page structure Page layout consistent Shortcut for most visited pages Access to main pages from home page No underlined text used apart from links Website logo linked to the home page Links should be identified Logical number of links Logical sitemap on the home page Internal search engine No use of flash Graphic images relevant to the content Text added to images Accessible from multiple browsers All parts on website are visible	Easy to use for all users Related domain title Language consistent with users Attractive design Easy scrolling of home page Short expressions used for explaining the items of the page Spaces between content Easy access to the Help section Fast Loading speed Appropriate page layout Colours consistent with writing style Margins around texts	Consistent site header/logo Consistent navigation area Page header less than 1/3 of the page size and includes the name Page footer includes copyright, last update, contact e-mail address. Uses basic design, repetition, contrast, proximity and alignment Displays without horizontal scrolling Balance text/graphics with white space Good contrast Home page downloads within 10 seconds Displayable on smartphones and tablets Displayable through different browsers Clear labelled and easy to use navigation Navigation is structured in an unordered list Colour scheme is limited to three/four colours Text colour contrast Fonts, font sizes and font colours are consistently used Graphics are optimised to limited download speeds Use image tags Use one common font Avoid using "Click here" for links Use techniques of writing for the web Company information Site map

Checklists are a useful method for measuring the usefulness and success of a website as this practice involves considering multiple features. Normally, when a researcher focuses on a task that involves several aspects, steps or directions, it is very likely that he/she may forget or miss a certain angle or aspect (Gawande, 2010). A checklist is usually used to ensure that the evaluation task is progressing in the right direction and that it does not miss any element.

In addition to ensuring the evaluation process is carried out correctly, checklists can have many advantages, as discussed by Raward (2001), Latumahina (2011), Dilenschneider (2012) and Patel (2011). These advantages include:

1. A checklist is a structured method and can be developed using different evaluation methods.
2. It can assist in the design of a new website or improve an existing one.
3. It is inexpensive and easy to apply.
4. It can be updated easily using new applications or ideas.
5. It gives a clear goal of what the researcher intends to do.
6. It can save time.

In this study, from the above points, the literature search indicated that the elements that determine the effectiveness of a website for audience satisfaction and engagement include: design and layout, content, landing speed, navigation and the graphics of the home page.

As mentioned earlier in section 2.5.2.1, this research has studied the most popular website design elements and checklists from 2008 to 2014. After reviewing several museum websites for the last few years (2012-2016) and analysing the most popular museums website (see Appendix D), the researcher found out that these websites have variable levels of audience satisfaction and engagements. The researcher developed his own museum's website checklist for the evaluation of museum website design and the success of audience online engagement for museums in Saudi Arabia, which draws upon the existing checklists above (table 2-3). However, existing checklists exhibit a high level of similarity along with some differences related to the specific purposes of individual checklists. The researcher noticed that all the previous checklists found in the literature are mainly used as bullet points, a table, paragraphs or a combination of those formats. In order to evaluate the whole website adequately without missing or overusing any element, the proposed checklist in this study is organised in a new, different format according to the webpage type. This format includes three main sub-checklists: a general checklist, a home page checklist and a sub-page checklist. The landing page will be considered in this research as a home page. The researcher synthesised the existing checklists by taking the most common and important features and collecting them into a signal checklist (see table 2-12 below).

Category/Feature	General elements For the whole website
Domain and URL	□ Meaningful domain name □ User-friendly domain name □ Clear domain name □ Descriptive domain name
Design and layout	□ Design with clear goals □ Branding consideration □ Keep design file size small □ File name structure □ Avoid heavy page loads □ Minimal loading time □ Ads and pop-ups are not recommended □ Minimal or no usage of Flash □ Attractive and trendy design □ Consistent design □ Design matching the museum collections □ Simple structure layout □ Layout easy to use by bandwidth users □ Clear layout □ Liquid and responsive layout □ Compatible across a range of browsers □ Optimised page size □ Mobile-friendly website □ (HTML5/or latest)
Images, graphics and media	□ High quality (professional) images □ Customisable image naming and tags □ Not too many graphics □ Provide text with any non-text content □ Easy to skip multimedia □ All graphic links available in text □ Avoid unnecessary animation

Category/Feature	Homepage	Sub-page	
General	□ Grab attention within 5 seconds □ Major headings are clear □ All major parts accessible □ Menus top or top right □ Menus consistent □ Elements should be distinct □ Elements should be easy to find □ (Accessibility)Font size AAA □ Policies and roles	□ Clear link to the home page □ Features are genuine on each page □ Major headings are clear □ All major parts accessible □ Elements should be distinct □ Elements should be easy to find	Common for all sub-pages
Museum name and logo	□ Prominent □ Consistent □ In top right corner	□ Prominent □ Consistent □ In top right corner □ Linked to the home page	
Navigation	□ Easy to use □ On top left or right	□ Easy to use □ Clear current location □ On top left or right	
Hyperlinks	□ Not many links □ If needed, link to credible third party references □ Links to partnerships/Sponsors	□ Distinct □ Easy to identify □ Titled with what they refer to □ If needed, link to credible third part references □ Not too many links	
Buttons/icons	□ Reasonable buttons size □ Social media tool icons □ Museum main sections □ Partnerships or/and Sponsors	□ Reasonable button size □ Social media tool icons	
Sitemap	□ Link if necessary/available	□ Link if necessary/available	
Online help (chat)	□ Link if available	□ Could linked from "Contact us" □ Could be a small window	
Search box	□ On the top □ Easy search features	□ On the top □ Easy search features	
Colour	□ Consistent □ Readable colour contrast □ Effective colour scheme □ Standard colours in text (Maximum 3 colours) □ Sufficient white space		
Images, graphics and media	□ High quality images □ Customisable image naming and tags □ Not too many graphics □ Provide text with any non-text content □ Easy to skip multimedia □ All graphic links available in text □ Avoid unnecessary animation		
Museum slogan	□ Museum slogan if available	□ If wanted	
Welcome text (Introduction/Key message)	□ If available	Not needed	

Main museum sections	□ Links/Icons/Buttons or pictures	□ Related information and/or collection and/or media □ History of Collections	Important elements
Museum news	□ Links/Icons/Buttons or pictures □ Just main news on the home page and links to the news page	□ All news □ linked to "About us"	
Museum's coming-up "events and activities"	□ Links/Icons/Buttons or pictures □ Just main events on the home page and links to the events page □ Link to events page	□ All past and coming events □ linked to "About us" and/or "Visit us" □ Museum's calendar □ Partnerships or/and Sponsors if available	
Shop	□ Links/Icons/Buttons or pictures □ Could be on the home page and links to the shopping page	□ Opening times □ Items pictures and details □ Items prices □ Shopping basket □ Payment secure system □ Delivery information □ Returns and refunds	
Gallery	□ Links/Icons/Buttons or pictures □ Could be on the home page and links to the Gallery	□ Well-categorised □ High quality graphics	
Join newsletter or RSS subscription	□ Links/Icons/Buttons/Bar	□ Successful joint message and/or email	Recommended
Membership account sign-in	□ Links/Icons/Buttons/Bar	□ Successful joint message and/or email	
User feedback	□ Links/Icons/Buttons/Bar □ Could be linked from "Visit us" and/or "About us"	□ Successful reception message and/or email	
3D virtual view	□ Links/Icons/Buttons or a picture □ Could be linked from "Visit us" and/or "About us"	□ Not needed	If wanted
Donation	□ Not needed or □ Could be Links/Icons/Buttons	□ Secure page □ Successful and Thank you reception message and/or email □ Could be linked from "Visit us" and/or "About us" and/or Event page	
"Contact us"	□ Links/Icons/Buttons	□ Prominent information □ Many contact methods □ Phone □ Email/s □ Address □ Post box □ Social media	Not all have to be on the main page
"Visit us"	□ Links/Icons/Buttons □ Could be Links/Icons/Buttons from "Contact us" page and/or "About us"	□ Museum address □ Museum location map □ Museum facilities (e.g. toilets ... etc.) □ Opening times □ Online ticket fees(If available) □ Group visiting details □ Group visiting information □ linked to "Contact us" and/or "Opining times"	
"Opining times"	□ Links/Icons/Buttons/Information □ Could be Links/Icons/Buttons from "Contact us" page and/or "Visit us" page	□ Link to "Visit us" and/or "Contact us" and/or "About us"	
"Our history"	□ Links/Icons/Buttons □ Could be Links/Icons/Buttons from "About us" page	□ Link to "Visit us" and/or "About us"	
"About us"	□ Links/Icons/Buttons	□ Introduction about the museum □ Informative □ Link to news page	
Fees and offers	Not needed	□ Group visiting information □ linked to "Contact us" and/or "Visit us" and/or "Opining times" and/or "About us"	
Downloads	□ Links/Icons/Buttons □ Could be linked from "Visit us" and/or "About us"	□ Brochures □ Publications □ Guidelines □ Maps □ Applications/Apps in available	

Figure 2-12 Musem's website checklist

2.5.2.2 Social media marketing

Social media marketing is a modern and fast method of digital marketing that allows marketeers to be a part of a network of users on the internet (Williams, 2009). There are many questions that have not been answered yet about the best way to utilise social media in marketing design (Cvijikj et al., 2012). Appearing in internet communities has attracted many organisations and companies to adopt this marketing field, which

has put more pressure on those who are still thinking about this or who have not embraced social media marketing yet (Cvijikj et al., 2012; Nekatibeb, 2012).

Many organisations, companies and especially museums are using a form of social media marketing. “Social media” encompasses a variety of forms including photo and video sharing, blogs, mini blogs, wikis and social networking sites (Fletcher and Lee, 2012). People usually use social media tools or applications to put forward ideas, opinions, content, experiences or even their profiles. Social media tools and applications such as Flickr, wikis, YouTube, Twitter and Facebook have altogether more than a billon users (Nekatibeb, 2012).

As can be seen in Figure 2-13 and Figure 2-14, each social media platform enables different kind of content depending on its functionality. Also, different age and gender groups are more active on some platforms than other. Museums have to consider what specific content they want to share and what is the specific target audience, in order to select the most suitable and effective platform for their use (Nekatibeb, 2012; AlSamman, 2014). Selecting the wrong platform for an organisation or a museum will result in a lack of reactivity and loss of credibility between the organisation and users (Kietzmann et al., 2011).

Platform name	Functionality	Percentage of users
Twitter	Micro blogging	54% male 46% female
Facebook	Social networking	43% male 57% female
Instagram	Photo and mini video sharing	55% male 45% female
Google+	Social networking	62% male 38% female
LinkedIn	Business networking	59% male 41% female
Pinterest	Photo sharing	32% male 68% female
YouTube	Video sharing	50% male 50% female

Figure 2-13 Social media general statistics
Statistics as of 25/4/2015 (Sources: leveragenewwagemadia.com and expandedramblings.com) Designed by the researcher

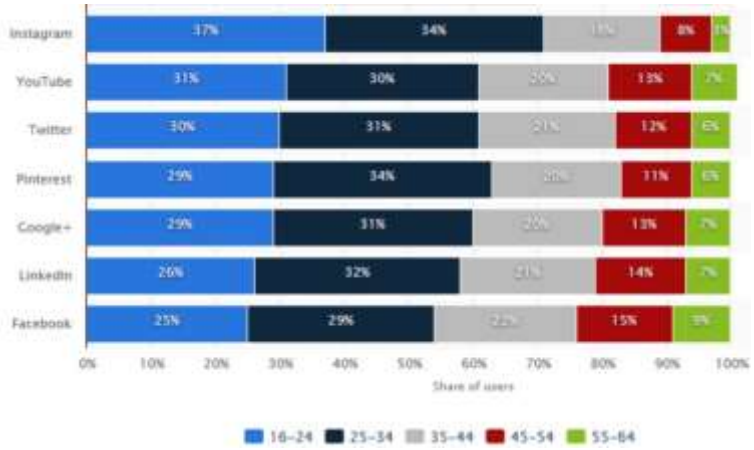


Figure 2-14 Age distribution of active social media users worldwide
Statistics as of 2014 (Source: karalambert.com)

Moreover, the popularity of social media networking sites varies from a particular country or region to another (Berthon et al., 2012). Figure 2-15 shows a comparison of top popular social media sites in Saudi Arabia, the Middle East and worldwide according to statistics from 2014 and 2015 (Radcliffe, 2014; internetworldstats, 2015; socialbakers, 2016). By conducting a simple comparison between Figure 2-15 and

Figure 2-16, it becomes clear that YouTube, Facebook and Twitter have been the most popular social media platforms for the last few years.

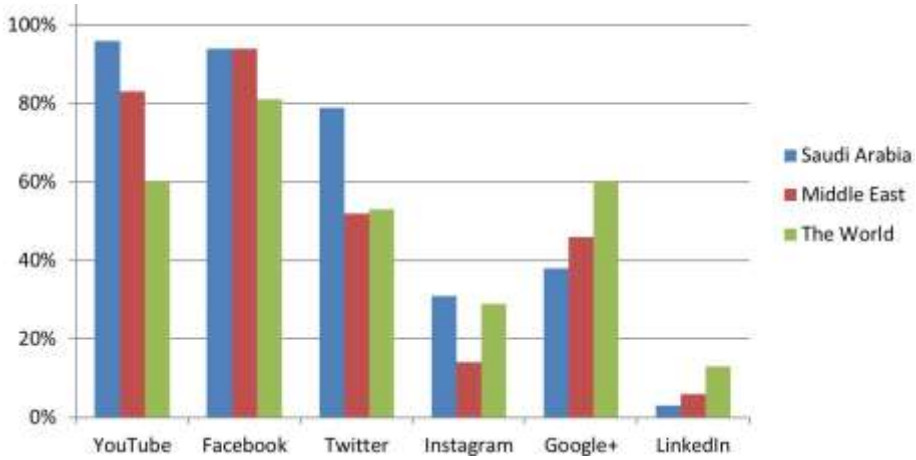


Figure 2-15 Comparison of top popular social media platforms
(Designed by the researcher)

Figure 2-16 Social media usage in Saudi Arabia in 2012–2013

(Source: Hamed, 2014)

Moreover, it is very important for a museum to have a social media policy and guidelines. Many large companies are using social media guidelines to maximise the benefits of social media (Lake, 2009). The museum could build its social media guidelines and policy itself or get help from ready-made guidelines and policies and adjust them to fit its purpose (King, 2010). Having social media a guidelines and a social media policy is useful for the museum for many reasons (King, 2010; Henricks, 2011; United Nations, 2011):

- To implement the museum strategy
- To improve its social media performance
- To share information needed for group work
- To protect the museum's reputation
- To use social media tools in a professional way
- To raise awareness of the museum
- To minimise confusion and mistakes
- To help to build the online community easier
- To help to respond to others before they get out of hand.

The most important point to bear in mind when using social media tools is the frequency of updating. Social media tools need to be updated more than websites do. They require posts on a daily basis, with weekly updating and monthly updating as well (Social Times, 2016). For example, the museum needs to post daily on its social media platforms, with each platform having its own frequency and timing schedule. Moreover, it is very important to respond and reply to everyone (Lee, 2016). Also, a tactic of weekly or monthly updating, and a monthly audit of the strategic plan is very important. On a

quarterly basis, goals can be adjusted and staff needs can be gauged (Social Times, 2016).

However, as mentioned in section 2.3.4, social media network sites have a finite lifetime; they have starting dates and many of them have shut down (see Figure 2-17). Choosing the right social media platform which is most likely to meet the strategic plan of the museum is more important than sticking to a single social media tool (McCann and McCulloch, 2012). Using a social media tool does not involve a standardised approach like a "one-size-fits-all" approach (Berthon et al., 2012). A museum has to customise the appearance of the social media tools and aspects of its goals (see section 2.3.8) and marketing strategy (see section 2.5.2.7) (Berthon et al., 2012).

2.5.2.3 Email marketing

Email marketing is another one of the digital forms used to deliver any message to an audience and can be used to develop interaction with them (Stokes, 2011; Salehi and Mirzaei, 2012; Julig, 2013). Organisations have been using email marketing to drive traffic to their webpages (Marketo, 2012). Records show that there were 4,353 billion email accounts in 2015 and an average of 205.6 billion emails were sent every day in the same year (The Radicati Group, 2015). A global survey with over 2,500 marketeer responses in 2013, by a company called "Exact Target", showed that email marketing is one of the top five areas (58%) that marketeers plan to increase their spending on(exacttarget 2014). In 2013 and 2014, about 85 percent of organisations in England were using email marketing and it was core to their business; the number could increase to over 88 per cent in 2015 (Digital R&D, 2014; exacttarget, 2014). Philippa Ward, a digital marketing executive, said when she was interviewed by Fell (2012) that "her role is specifically digital marketing, including social media marketing, email marketing and mobile marketing" (Fell, 2012, p.14).

There are many advantages associated with using email marketing. It is one of the important direct communication channels for building and maintaining relationships with existing and potential customers (Stokes, 2011; The Internet Marketing Academy, 2011; Kelly, 2012; Mirzaei and Jaryani, 2012). John Jantsch (2009, p.10) said that he uses email marketing to "blow his competition away at trade shows". Email marketing is also

highly cost-effective, customisable on a large scale, entirely measurable and a strongly global targeted tool (Stokes, 2011; Salehi and Mirzaei, 2012). In addition, email marketing makes repeat sales, brings important feedback, drives web users to the website and drives real traffic through the door (Mirzaei and Jaryani, 2012; Salehi and Mirzaei, 2012). It is also quick, easy, cheap and builds loyalty and trust (Bhandari, 2012; Nguyen, 2014).

On the other hand, email marketing has some disadvantages as well. Bhangal (2011) in his research about online marketing mentioned six disadvantages for email marketing which are:

1. Undelivered emails: there is no guarantee that your email is not going to "junk-mail" or has been deleted without opening.
2. Some items could be changed like colour, font and graphics due to different email reading systems.
3. Email overload: when a target audience receives too many emails in their inbox, they have to identify which emails they have to read and which are unsolicited emails. The time that they need to read through the emails should also be taken into consideration.
4. Emails can deliver viruses and make the target audience lose their trust in the organisation.

Fariborzi and Zahedifard (2012) added two more disadvantages:

5. Some people may not stay subscribed and reactive for a long time.
6. Expense: although sending emails is very cheap, some organisations want to send a sophisticated email newsletter which may cost more money.

Developing email marketing for museums is very important as museums need to generate and maintain a relationship with their community to survive (see section 2.3.6). It is a useful tool for museums, affording them a greater opportunity to reach their target audience than any other traditional channel (Forootan, 2012). Regardless of the minor disadvantages of email marketing, it is still very useful for museums and every email can send a good interactive message, enabling the museums to reach their goals (see section 2.3.7) (Forootan, 2012; Salehi and Mirzaei, 2012).

The frequency of sending emails and providing quality and relevant content is very important to consider. Too little contact is not good for brand awareness; nor is too much contact (Chaffey, 2015b). A research study done by the Direct Marketing

Association (DMA) in 2010 in the UK showed that 73 per cent of customers said that the main reason for unsubscribing was the frequency of emails. A research study done by Marketing Sherpa, a UK firm specialising in tracking what works in all aspects of marketing through research, showed that most people accepted weekly or less frequent emails, as shown in Figure 2-19.

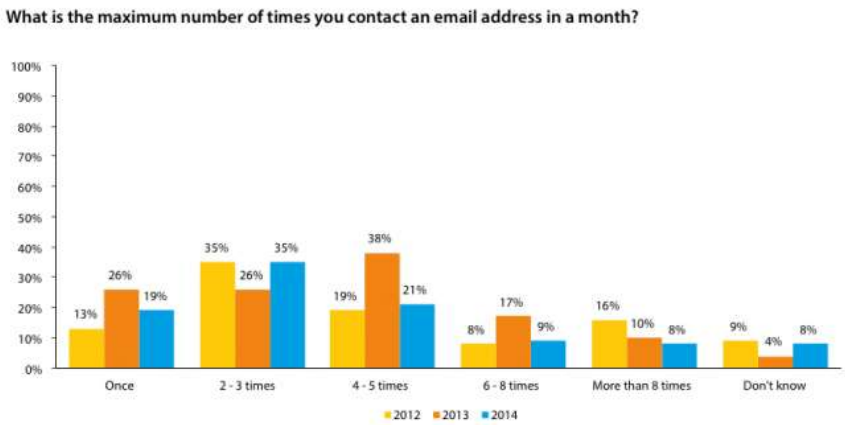


Figure 2-18 Number of times email addresses are contacted in a month
(Source: DMA National Email Report, 2015)

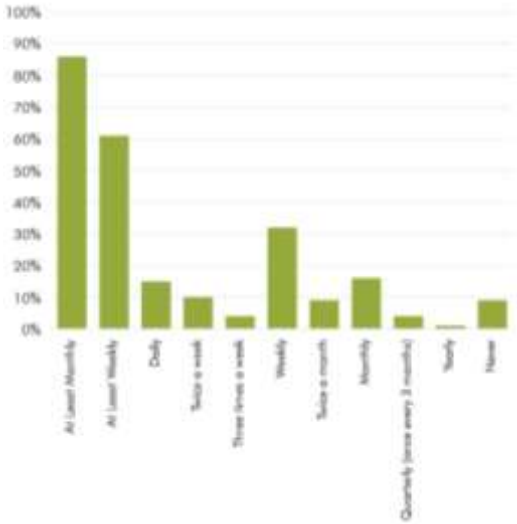


Figure 2-19 Accepted email frequency
(Source: Marketing Sherpa)

According to the DMA (2015), email marketing has become more strategic in its approach. Targeting emails to the right audience, high-quality content and choosing the right frequency are the key elements for increasing brand awareness and creating a positive reaction (Dibb and Simkin, 2004; Chaffey, 2015b). In addition, as the Marketing Association (2008) mentioned, to ensure the best value for email marketing, organisations (museums) have to use email marketing guiding principles. Using email

marketing guidelines will ensure that the email campaign is follows best practice, taking legal issues into consideration, and it is measurable (Mail Chimp, n.d.).

2.5.2.4 Online content marketing

In the age of digitalisation, digital marketing, including websites, social media marketing and email marketing, is increasing from one year to another (as mentioned in section 2.5.2). And the success of the digital marketing depends on the content that this marketing delivers.

According to the Content Marketing Institute, content marketing is "the marketing and business process for creating and distributing relevant and valuable content to attract, acquire, and engage a clearly defined and understood target audience – with the objective of driving profitable customer action" (Patrutiu Baltes, 2015, p.112; Content Marketing Institute, n.d.). Similarly, Rowley (2008) defined digital content marketing thus: "Digital content marketing is the management process responsible for identifying, anticipating, and satisfying customer requirements profi tably in the context of digital content, or bit-based objects distributed through electronic channels".

Furthermore, many definitions have been given by other organisations and specialists in the area. Content marketing is "what a company creates and shares to tell its story". Although content marketing is a wide topic and includes all kinds of content and not just about digital marketing, digital content is important and looks at customer behaviours and priorities (Patrutiu Baltes, 2015, p.112). To emphasise this point and for the purpose of this study, the meaning of content marketing in this research is about digital content, not what Koiso-Kanttila (2004) meant; it is a type of marketing where the product and the delivery are digital (Rowley, 2008).

Content marketing is more about a strategic marketing approach used to engage with the audience (Murthy, 2011; Alexandria, 2015). As people should obtain trust in each other to create a good relationship, similarly organisations such as museums are required to build the credibility of their potential followers or visitors in their subject (Patrutiu Baltes, 2015). Content marketing can target different age groups and gain

positive responses. People normally do not understand that the content they are interested in receiving is intended as advertisement materials (Alexandria, 2015).

According to Loredana (2015), organisations should consider the following most common content marketing objectives when they formulate their content marketing strategy:

1. Increasing the brand knowledge
2. Developing connections based on credibility
3. Answering audience questions
4. Creating a necessity for a specific product
5. Building audience loyalty
6. Evaluating product opinions
7. Topics have to be interesting to the audience
8. Using diverse media and links

In fact, museums have rich content. Every item of the collection, show or exhibit is a source of the content the audience would like to have access to. Depending on the type of museum and the subject of the collections, the museum knows who their target audience is and who they are keen to attract. The museum can consequently adapt the content topics to be attractive to the audience. Museums can promote their content over their websites; social media and email marketing will drive people to visit and re-visit museums' online profiles and websites, and then this can be converted into through the door visitors (Great River Creative, 2014).

2.5.2.5 Online branding

Brands arguably existed for a long time before the modern meaning of brand and branding emerged (Avis, 2009; Hegarty, 2011). But the modern concept of the brand started just before the 20th century when packaging and trademarks began to be used (Avis, 2009). Branding is the implementation of an independent sign, icon or symbol to make an organisation recognisable through marketing, bringing out the organisation's personality (Knight and Glaser, 2010).

Branding is important for non-profit organisations such as museums and should be included in the museum's marketing strategy (Kotler et al., 2008; Appel, 2015; Hamed, 2015). Branding reputation gives the museum value as the brand is what people

tell each other about; it is no longer what the museum tells people about (Rentschler and Reussner, 2002; Gensler and Völckner, 2013). A good reputation means having a good brand value, which leads to a good market value (Wood, 2000). As a result of the two-way communication of Web 2.0, branding has now changed and it has a strong relation to social media marketing (Gensler and Völckner, 2013; Maria and Almeida, 2015). The interaction with the brand through different digital points including social media and online communications and reviews is essentially under the scope of digital branding now (Maria and Almeida, 2015).

Branding guidelines should be developed before designing an organisation or a museum advertisement or web presence, in order to help determine the brand and keep it consistent (Smith, n.d.). In fact, designing branding guidelines goes beyond tangible or visual aspects, such as names, logos and slogans, imagery and so on. Non-tangible aspects of branding are very important too. For the purpose and the main aim of this research, the study will concentrate on the design aspect of the web presence's digital branding.

The meaning of web presence for this research includes websites, social media marketing and email marketing. The museum website has to be more than a signboard of information. It should interact with and invite visitors to share content through social media tools (see section 2.5.2.A and 2.5.2.B).

Component	Standard
Web mark-up	HTML5 (.html, .htm)
Styling	CSS3 (.css)
Client side scripting	JavaScript (.js) Please discuss any libraries you are proposing before starting
Viewer document file types	Adobe Acrobat document (.pdf)
	Microsoft Word document (.doc)
	Rich Text Format document (.rtf)
	Plain/Formatted Text document (.txt)
	Microsoft Excel spreadsheet (.xls)
	Microsoft PowerPoint document (.ppt)
Images	Joint Photographic Experts Group (.jpg)
	Graphics Interchange Format (.gif)
	Portable Network Graphics (.png)
Animation	Graphics Interchange Format (.gif)
Video formats	Normally streaming - see video section
Audio	Normally streaming – see audio section
File compression	Zip files (.zip)

Figure 2-20 Victoria and Albert Museum's standard file types (guidelines)
(Source: Lewis, 2015)

Museums should develop their branding guidelines for their web presence in order to build a strong identity (Vassiliadis and Belenioti, 2015). These guidelines should cover anything that may appear on the museum website such as the museum logo, slogan, colour palette, image style, and templates (Smith, n.d.). These guidelines are the starting point for any web presence feature (Lewis, 2015). Figure 2-20 shows the Victoria and Albert Museum guidelines for standard file types and data that can be used on their website. Another example in Figure 2-21 shows some details of the logo use guidelines for the British Museum. Further examples showing its digital presence font guidelines are presented in Figure 2-22 and an on-site poster is presented in Figure 2-23.

The minimum width of the logo is 25mm.	The British Museum 25mm
The logo can only be produced in black or white.	The British Museum The British Museum
There must be clear space between the logo and other design elements. Clear space is measured by the width of the "M" in Museum. Design elements are symbols, rules, wording illustration or photographic edges.	The British Museum M M M M

Figure 2-21 Logo use guidelines of the British Museum
(Source: The British Museum's branding guidelines)

Sans serif. For use on digital application, website, on-screen presentations and Microsoft Office templates. Arial is a standard cross-platform font available worldwide.	Arial. Regular ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwyxz 0123456789 *Arial. Regular italic* *ABCDEFGHIJKLMNOPQRSTUVWXYZ* *abcdefghijklmnopqrstuvwyxz 0123456789* **Arial. Bold** **ABCDEFGHIJKLMNOPQRSTUVWXYZ** **abcdefghijklmnopqrstuvwyxz 01234567** ***Arial. Bold italic*** ***ABCDEFGHIJKLMNOPQRSTUVWXYZ*** ***abcdefghijklmnopqrstuvwyxz 01234567***

Figure 2-22 Digital presence font guidelines of the British Museum
(Source: The British Museum's branding guidelines)

Figure 2-23 On-site poster
(Source: The British Museum's branding guidelines)

2.5.2.6 Search Engine Optimisation (SEO)

Search Engine Optimisation, which is widely known as SEO, has a significant impact on online search engine results. As a result of the explosion in the number of web page links and websites, there is a requirement to exactly rank the web links and websites from extremely relevant to less relevant ones according to the requirements of the user (Singh and Manin, 2013). It allows users to find the most related data to their keywords (Kritzinger and Weideman, 2015). According to the Search Engine Marketers Professional Organization, SEO is: "the process of editing a web site's content and code in order to improve visibility within one or more search engines" (Killoran, 2013, p.53), preferably so that the website ranks at the top of the search results page (Zaghoul et al., 2014).

The existing literature shows that a number of studies in this field have been undertaken. Studies have identified many techniques that could affect the organic visibility of the search results and help to bring a particular website organically to the top of the search results page (Shepard, 2011; Wowe, 2013; Baye et al., 2014). Baye et al. (2014), Zaghoul et al. (2014) and Gudivada et al. (2015) have mentioned in their studies some of these techniques, which can result in better search engine rankings and therefore an increased number of clicks through to a particular website:

1. Keyword similarity and combination
2. Keyword importance and weighting
3. Keyword frequency (Inverse Document Frequency) (TF-IDF)
4. Ranking methodology (such as user profile)
5. Meaningful, relevant and short URLs
6. Reflective title tags (meta description tags)
7. Updating the website frequently and keeping it up to date
8. The amount of change within updates
9. The quality and relatability of the updating is also very important

However, it is important here to mention that, SEO practices change rapidly due to changes in the way search engine's algorithm like Google work (Killoran 2013; Marketo 2014).

Additionally, there are other methods used to bring a website to the top of the first page of search results, such as pay per click (PPC) and the white hat technique. PPC is a non-natural ranking method which shows advertisements at the top of the search

results page and the advertiser is charged every time the user clicks on the advertisement (Kritzinger and Weideman, 2015). Usually, search engine companies present PPC results alongside the organic results but they are grouped separately; see Figure 2-24.

The white hat SEO technique is the organic method for gaining better results. This technique follows search engine guidelines. It improves the website content and usability, and consequently increases user satisfaction (Berman and Katona, 2013). This technique requires good and valuable content, reliable links, good internal navigation, unique and accurate titles, multiple key words and other ethical elements (Singh and Manin, 2013). The white hat SEO technique is leading to better search results and it is better for long-term sustainability (Jain, 2013).

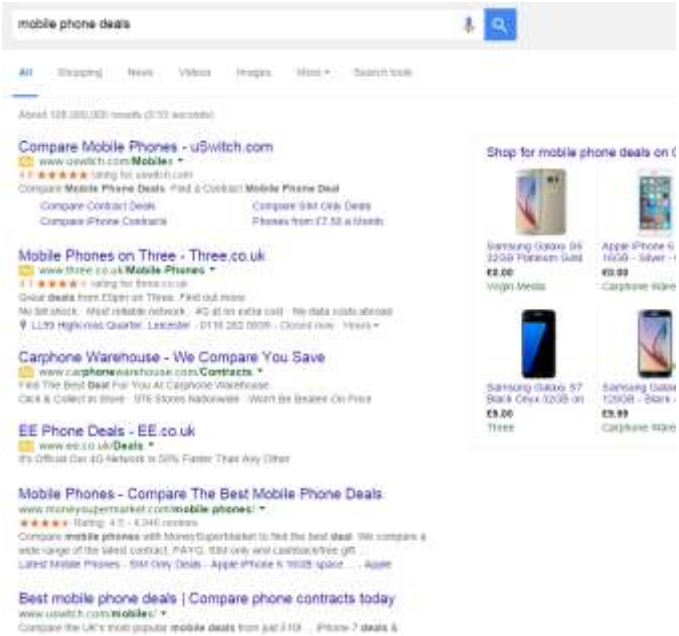


Figure 2-24 PPC results
(Source: Google.com)

On the other hand, there are unethical SEO short-term techniques to bring websites for particular search terms to the top of the search results page, such as the black hat and off-page SEO techniques (Singh and Manin, 2013; Baye et al., 2014). These techniques do not follow the guidelines of search engine companies; it tricks their algorithms. They farm fake links, use hidden text, scrape from popular web pages, deliver content to search engines that is not what is displayed to the user, and use other

unethical techniques (Jain, 2013; Killoran, 2013; Singh and Manin, 2013). Table 2-4 shows a brief comparison between white hat SEO and black hat SEO.

Table 2-4 A comparison between white hat and black hat SEO

Subject	White hat	Black hat
Status	Approved by search engines	Disapproved of by search engines
Content	Relevant content Natural and related keywords Complete and good sentences	Duplicate content Stuffed keywords Not high quality sentences
Links	Reliable links	Link farming Links from non-relevant sites Re-directing users
On-page	Well-labelled images Standards-compliant HTML Unique and relevant titles	Invisible cloaking and text Blog comment spam Hidden text titles

(Designed by the researcher)

There are many search engines available on the web, such as Yahoo, Bing and the very popular Google. They change their ranking algorithms repeatedly to guarantee that the most related results are always delivered to the user (Jain, 2013; Killoran, 2013; Baye et al., 2014). Search engine companies like Google are appreciated and they support white hat technique, and most reliable companies are using it to naturally obtain the best results (Jain, 2013).

Museums should consider SEO when they design their web presence. They should aim to be number one in the Google search engine at least, when a user searches for their specific name or expressions, and to be on the first page of results in their subject. For a museum, it is recognised that applying a SEO white hat technique will bring more visibility in the Google search engine and drive more traffic to the museum's webpages (Killoran, 2013). Naturally increasing the SEO ranking through following search engine guidelines will improve the museum's off-line and online communication with the public (Kéfi and Pallud, 2011).

Museums in Saudi Arabia have a better position in the SEO competitive market than developed countries like the USA or the UK. Museums in Saudi Arabia need to spend much less effort on their website SEO to achieve success in terms of a higher ranking in search engine results (IstiZada, 2014). It is worth mentioning that Google is the most popular search engine in Saudi Arabia. According to Global Customer Acquisition, Google accounts for about 95 per cent of the search engine market in Saudi Arabia (Global Customer Acquisition, 2013). In order to check their website status, museums in Saudi Arabia can easily join any free SEO sites which comply with the

Google, Yahoo and MSN guideline lists (Chan, 2008). Moreover, PPC advertising in Saudi Arabia is still not a competitive market, especially for museums. In addition, the cost of PPC in the country is still very low (IstiZada, 2014).

2.5.2.7 Marketing strategy

The marketing strategy includes the planning of all essential long-term and short-term activities in the field of marketing. In details, usually a strategic plan for long term period covers between three to five years and tactic plan covers short-term period in more detail action to be taken (McDonald & Wilson 2011).

Since the birth of online marketing and its merger with traditional marketing, organisations have been required to rethink their marketing strategies to be able to survive in the new digital age (Patrutiu Baltes, 2015). The online marketing strategy, the focus of this study, is the part of the marketing strategy related to the internet, involving aspects such as websites, email and social media (Parmar, 2014). It is involved in all aspects of online marketing such as the website design, email marketing, content marketing and branding (Quelch and Klein, 1996; Broadhead and Carroll, 2001; Pett, 2011). In addition, it involves considering how these tools work altogether to gain the best results possible (The Internet Marketing Academy, 2011).

Figure 2-25 Mission, objectives and activities
(Source: Zorloni, 2012)

Vision and mission are very important for any strategic plan. The whole strategic plan is determined by its direction, see Figure 2-24. The clear statement of vision and mission is a crucial part of the strategic planning process. They are considered as the

foundations of the action plan (Tallant, 2009). They need to be agreed upon by all members of the organisation (McKay, 2001).

There is a big argument about the similarities and differences between vision and mission and whether they are the same or not (J. Evans, 2010). Naisbitt (2000), Brătianu and Bălănescu (2008), Grusenmeyer (2012) and Calfa (2014) believe that they are different. However, the similarities and differences between vision and mission are small (Members of the Government Libraries Section of the International Federation of Library Associations, 1993). Both vision and mission are integrated in the building of the strategic plan (Brătianu and Bălănescu, 2008). They help the organisation to identify, explain and recognise itself (Tallant, 2009). Table 2-5 presents some differences between Vision and Mission.

Table 2-5 Some differences between Vision and Mission

Vision	Mission
Definition: "An overarching statement of the way an organization wants to be; an ideal state of being at a future point" . (asq.org)	Definition: "An organization's purpose". (asq.org)
It defines WHERE an organisation wants to be	It defines what the organisation DOES, WHO it does it for; and HOW it does what it does
It is what an organisation WANTS TO BECOME	It is what an organisation IS
It is the DREAM or MENTAL PICTURE toward which the organisation is moving	It is the definition of why the organisation EXISTS currently and the boundaries within it operates
FUTURE-oriented	PRESENT leading towards the future
The mission statement guides the day-to-day actions and decision-making of the organisation.	The vision statement is, in a sense, loftier. It outlines the worldview of the organisation and why it exists

(Sources: J. Evans (2010), diffe.com and Calfa (2014)

Online strategic goals and objectives are essential parts of the online marketing strategy (Third Wave, 2013; Zhang, 2013). A clear mission helps the organisation move towards achieving its goals or objectives (Tallant, 2009). The context of the online marketing strategy goals should describe how in each activity tools can be used to meet these goals (Stewart, n.d.). A clear mission/vision is the source of the strategic goals/objectives and then all activities, as is clear from Figure 2-25. To make sure that objectives are stated in the right way and quantify the mission, they have to be specific, clear, measurable and trackable. Or in other words, they have to as a minimum be SMART, which according to Allen-Greil (2012) consists of the following components:

S: Specific, simple and significant

M: Meaningful, measurable and motivational

A: Achievable, action-oriented and agreed upon

R: Relevant, results-oriented and rewarding

T: Timely, trackable and tangible

Conducting a current situation analysis is very important to develop a strategic marketing plan. It estimates where the organisation is now, what they are doing and what competitors are doing and helps to define the future objectives (Bhandari, 2012; Rupik, 2014). There are many tools used to apply situation analysis and the most well-known is called SWOT analysis (Boulton, 2009). SWOT analysis involves considering internal and external issues to draw up a good picture of the current situation; see Figure 2-26 (Bhandari, 2012).

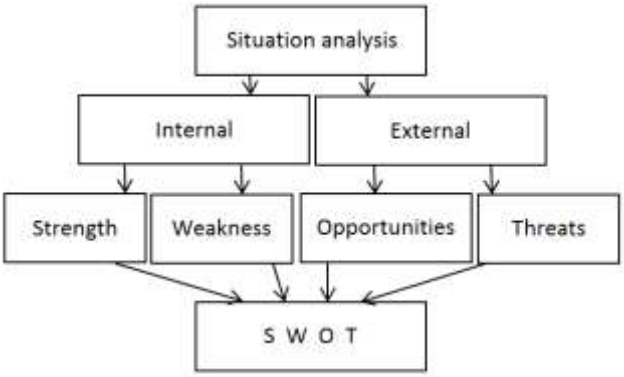


Figure 2-26 SWOT analysis
(Source: Bhandari, 2012)

Web design and mobile web presence are also a part of the online marketing strategy (EPiServer, n.d.). The website strategy covers more than simply owning a URL domain. It also relates to how to deal with the SEO over the long term and the marketing strategy. The strategy should cover every single detail of the website, such as choosing the right domain name, linking with other websites, developing a web content policy and applying the right checklist (Broadhead and Carroll, 2001; Kats, 2012) (see section 2.5.2.1).

Social media is one of the mainstream online marketing strategy tools used to achieve good communication with the audience (Ray et al., 2010; Baird and Parasnis, 2011; Meredith, 2012; Zhang, 2013). The strategic plan for this tool includes social media targeting the audience, social media content and user-generated content. The essential part is choosing the right social media tools or platforms, taking into account

the organisation's vision, objectives and tactical plan. And finally, it involves controlling and evaluating the social media used (Odden, 2011; Cvijikj et al., 2012; Third Wave, 2013) (see section 2.3.7).

Another important issue within a strategy is the frequency of updates. Most tools need to be updated at different frequencies. For example, each event and piece of news requires a website update (Shepard, 2011). The creative design company Visual People suggest that websites should be updated once a month at least. They add that changes have to be made to the whole website at least once every 6 months (Visual People, 2016). However, different websites have different needs for fresh content, and the quality and relatability of the updating is also very important (Shepard, 2011; Wowe, 2013) (more details are available in section 2.5.2.1).

Social media requires posts to be made on a daily basis. It is also very important to respond and reply to everyone as soon as possible (Lee, 2016; Social Times, 2016). Also, there should be a tactic for weekly or monthly updating; a monthly audit of the strategic plan is very important, and goals need to be set and staff needs assessed on a quarterly basis (Social Times, 2016) (mentioned in detail in section 2.5.2.2).

Also, knowing the target audience, for example, their gender, age group, income level, knowledge level and so on is an essential part of building an online strategy (Broadhead and Carroll, 2001). Similarly, data needs to be measured (Zhang, 2013) and every single tool or activity that the online marketing may need to be taken into account. The measurement of performance is a natural component, particularly within the internet age (Kellen, 2003). Monitoring and evaluating should be built around the framework as methods to measure the performance and it is as important as identifying the museum's vision, goals and strategic plan (Huelsbeck et al., 2011; Mcnamara N.D). Every aspect of performance has to be monitored and measured and this will help in reflecting the current strategy and in developing future performance (Kennerley and Neely, 2003; Huelsbeck et al., 2011).

2.5.3 **Museum marketing**

Lehman and Roach (2011) noted that cultural organisations generally have applied the new aspects of marketing communication at a late stage, which has affected their

success. The reason for this is that museums are a part of culture and are mostly non-profit organisations; therefore, they do not generate a huge number of visitors and thus money (Lehman and Roach, 2011). Despite the fact that marketing research for museums has only recently been implemented, the new digital age is providing museums with great opportunities to develop their innovative marketing strategies (Siano et al., 2010; Lehman and Roach, 2011).

A high number of museum staff can obviously see the requirement for museums to develop an improved online marketing strategy using all forms of new online media to build more engagement with their audiences (Lehman and Roach, 2011). Museums in the 21st century should examine the whole scope of their marketing techniques and involve modern information and experience in the design of their websites, e-marketing, branding, and all online aspects of their strategic marketing, and combine this with their traditional marketing (Kotler et al., 2008). Online marketing platforms have become the fundamental operator tool in the museum sector (Lehman and Roach, 2011).

2.5.4 Museum marketing in Saudi Arabia

There is a lack of research in the field of marketing strategy in Saudi Arabia in general (Alshetwi, 2013). In addition, there is a lack of principles concerning the online marketing of museums in general (Siano et al., 2010), and museums in Saudi Arabia in particular; however, fortunately, museums in Saudi Arabia still have great potential. Museum online marketing is not a hard task in Saudi Arabia, essentially because there is not a highly competitive market and the few other competitors do not completely understand it (The Internet Marketing Academy, 2011). Also, social media usage in Saudi Arabia is very high and represents the highest level recorded in the region (Hamed and Higgett, 2014).

Museums in Saudi Arabia should start (as mentioned in section 2.5.2.7) by examining their mission/goals and objectives, understanding the external and internal situations and then develop a plan of action (McLean, 2015).

2.6 Existing models and frameworks

Models are the processes that are often employed in the development of a marketing strategy and a marketing-driven business strategy. Models are outlined and designed to target a particular marketing matter (Wind and Lilien, 1993). Having a web presence gives the company or the organisation the chance to target millions of people, especially by using a cost-effective web presence model (Bahathiq, 2010). Each model or framework sets out some selected aspect and describes each of its disciplines (Fill and Jamieson, 2006).

The literature is rich in marketing models and frameworks which have been employed for a long time. For instance, the AIDA advertising model was developed in about 1900 by E. St Elmo Lewis and inspired many researchers to develop new versions such as AIDCA by Clyde Bedell in 1940, and the ACCA model by Russel Colley in 1961 (Karlsson, 2007; Wijaya, 2012; Rawal, 2013). Marketing strategic models have to consider the overall mission of the organisation and related aspects (see section 2.5.2.7) (Wind and Lilien, 1993).

For the purpose of this research, this study only includes related models and frameworks which can be adapted to fit, even partly, the research aim and objectives. As this study is related to different areas like marketing communication, marketing strategy and mainly online marketing, chosen models have to be related directly to one or more of these elements and mainly to online marketing, the capability of implementation of marketing across online channels and audience engagement. Adding to that, popularity and performance are considered when choosing the related models. The details of the criteria for applying the related models into the proposed framework are provided in section 7.2. There are six models and frameworks out of twenty-seven which may affect the development of the framework used in this study to the web presence and associated online marketing strategy for museums in Saudi Arabia: the DRIP marketing model, STP, PRACE, ASP, McDonald, and SOSTAC. These are discussed next.

2.6.1 DRIP marketing model

The DRIP marketing model is applied to boost marketing communication strategic planning. It is based on the continual sending of a particular message to a

carefully targeted audience. The main aim of the DRIP marketing model is to help convert a potential target audience into real customers (Fill and Jamieson, 2006; Cook, 2008; Ravi, 2011; Hanlon, 2013). DRIP is an acronym that stands for Differentiation, Reinforce, Inform and Persuade; see Figure 2-27.

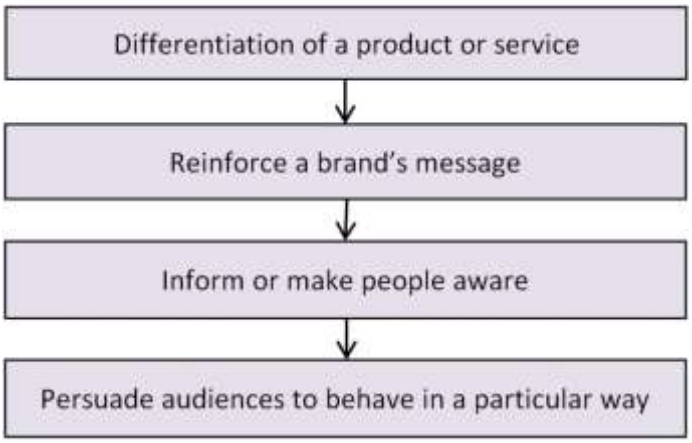


Figure 2-27 DRIP marketing model
(Source: Hanlon, 2013)

The DRIP marketing model was developed by Chris Fill and can be a modern alternative to the AIDA model (Hanlon, 2013). Unlike an e-newsletter which is sent to all of the target audience, the DRIP marketing model concentrates on sending specific information to a specific target audience based on what they are interested in (Derwood, 2016). It also helps in increasing brand awareness and education by presenting helpful knowledge around the company or the organisation's products and services (Cook, 2008). It is also a perfect tool for creating new opportunities (Marketo, 2012).

On the other hand, DRIP marketing has some disadvantages as well. Firstly, it depends only on email marketing and is not suitable for other aspects of online marketing. Secondly, as DRIP marketing focuses mostly on email marketing, sending a lot of emails can create a bad impression as well and result in the audience ignoring them. Therefore, the DRIP model could be used just in email marketing not in developing the framework. DRIP marketing shares the same disadvantages as email marketing (Cook, 2008; King, 2011) which were mentioned in detail in section 2.5.2.3.

2.6.2 STP marketing strategy model

STP is an acronym for an important popular marketing theory, standing for Segmentation, Targeting and Positioning (Han et al., 2011; Jun, 2011). It focuses mainly on the making the correct choice of marketing position and is coordinated with the company or the organisation's goals and objectives (Han et al., 2011). Figure 2-28 illustrates the STP process which is used mainly to target and determine which market or opportunity is best to follow (Bahathiq, 2010).

Figure 2-28 STP process
(Source: Bahathiq, 2010)

STP is widely considered as one of the best strategic models in the 21st century for identifying a specific target market and directing marketing activities to the best strategy for it (Lynn, 2011; Nguyen, 2014). It divides the market depending on four different criteria: geography, demography, psychology and customer behaviour, in order to develop the best strategy for each marketing segment (Nguyen, 2014).

However, the STP marketing strategy model can only be applied to one level or segment of the company or the organisation. Different levels or segments need to apply several STP marketing strategies in order to get the best result. The STP model also limits the wider brand strategy (Lynn, 2011). It needs to involve other marketing strategies to fulfil the complete marketing needs of the company or the organisation (Smith and Chaffey, 2013). It can only focus on or discover an existing market and cannot develop new market segments. It also required an in-depth study of the target market and audience, which Michael Lynn (2011) argues will require a more specialised market researcher.

Thus, the STP strategy could be a useful tool to use on a small number of targeted segments within a particular market, but not for sectors like museums which have a more varied audience (Lynn, 2011).

2.6.3 ASP marketing model

Figure 2-29 ASP marketing model
(Source: Guffey and Almonte, 2012, adapted by the researcher)

ASP is a marketing model that was developed by Sally Dibb and Lyndon Simkin. It stands for marketing Analysis, Strategy and Programmes, focusing on the organisation succeeding through customer satisfaction (Guffey and Almonte, 2012). Through the ASP model, marketers have to fully understand the market before planning their strategies, which helps to build the basis of their action plan. According to Rupik (2014), Analysing includes SWOT analysis, customer analysis and marketing environment analysis; Strategy includes selecting opportunities, choosing brand positioning and objectives; and Programmes includes determining targets, setting sales targets and performance monitoring.

Through the intensive research undertaken in this study, the researcher did not find any academic research or critical review study that has discussed this model. However, the present study considers the advantages of this framework and the aspects it has in common with other models and frameworks. Thus, this model could be useful for further analysing and applying into the proposed framework of this study.

2.6.4 SOSTAC marketing model

The SOSTAC marketing model was developed by the marketing author and international speaker Paul Smith between 1993 and 1996 (Bhandari, 2012). The SOSTAC model stands for six important solid marketing elements: Situation analysis, Objectives, Strategy, Tactics, Action and Control (Smith and Chaffey, 2013). As Figure 2-30 shows, Smith did not separate these elements but there is a kind of superposition in each level of the planning, each level probably contacted and determined as indicated by reversed arrows in order to develop an overall online marketing plan (Bhandari, 2012).

Figure 2-30 SOSTAC e-marketing model
(Source: Chaffey and Smith, 2008, adapted by the researcher)

As in the ASP model, SOSTAC also uses SWOT analysis (see Figure 2-26) in its situation analysis level and uses SMART objectives as well (Bhandari, 2012; Smith and Chaffey, 2013). Saroj Bhandari (2012) also included competitor and demand analysis besides SWOT analysis within SOSTAC's situation analysis level.

The SOSTAC model is an easy to apply guide manual. It has been used to develop marketing plans, online marketing plans, advertising plans and other types of plans; according to Smith and Chaffey (2013), thousands of professionals have used it. It is especially designed for online marketing. Placing situation analysis at the initial level of the model also gives the model more power (Reed FIDM, 2014).

Although the SOSTAC model is a well-known and accepted business model and has been adopted by a large number of organisations around the world, no academic critical review study has discussed it yet. The present study has considered the wide spread and uses of this model as an advantage of this model in addition to the common elements shared by all of other models. Therefore, this research will consider this model by analysing and applying it into the proposed framework of this study.

2.6.5 McDonald's strategic marketing planning framework

McDonald's strategic marketing planning framework has been used by all organisational sectors to develop their marketing strategies and action plans (Dibb et al., 2008). As Figure 2-31 shows, McDonald divided his strategic marketing planning process into four main phases: Goal setting, Situation analysis, Strategy formulation and

Resource allocation and monitoring. Like the ASP model, McDonald's framework also relies on SWOT analysis in his marketing audit stage (see Figure 2-26).

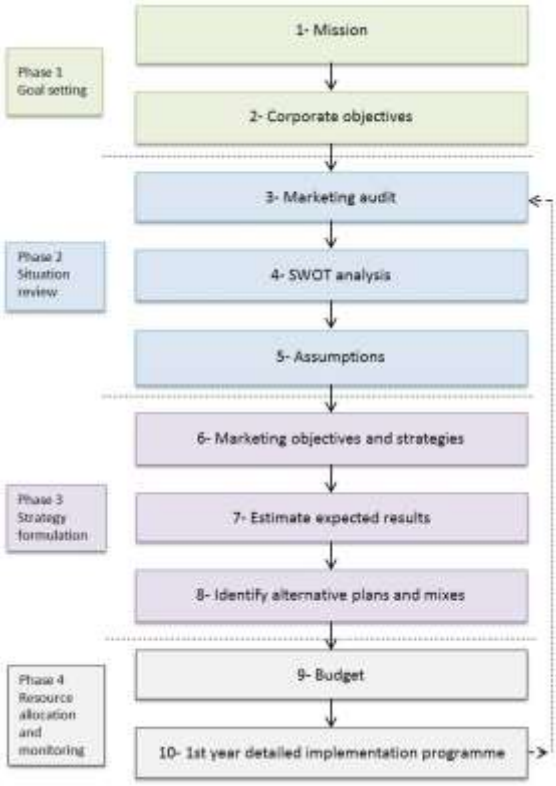


Figure 2-31 McDonald's strategic marketing planning process
(Source: McDonald 2008)

Applying McDonald's strategic marketing planning process requires managers to merge both the strategic plan and action plan with the company or the organisation's plans. The marketing plan should process and evaluate every financial year using the management information system and the complete process then starts again. McDonald depicted this process (Figure 2-32) using a circle to show that this process is a continual process and to hide whether the process is top-down or bottom-up (McDonald, 2008).

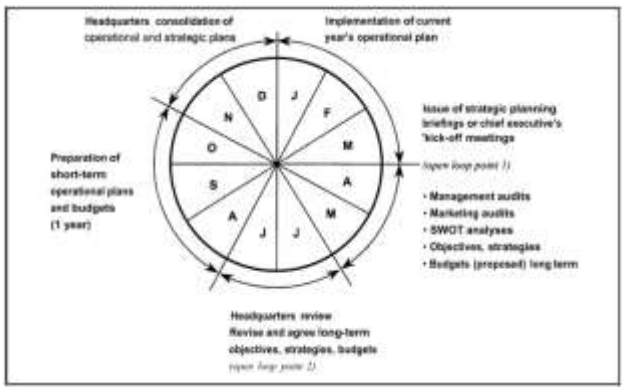


Figure 2-32 McDonald's operational planning
(Source: McDonald, 2008)

McDonald's strategic marketing planning process aims to develop the strategic marketing plan of the organisation for three to five years and the action marketing plan for the objectives of the first year (McDonald, 1999). McDonald's strategic marketing planning framework fits in with the strategic behaviours paradigm and the views of the behavioural school of management and also is on a rational scale. The extent of the organisation's planning process is the main determinant of the kind of system it uses, according to McDonald (Rupik, 2014). He also linked the marketing planning process with the existing organisational culture (Rupik, 2014).

The present study has considered the advantages of McDonald's framework as a well-known accepted business framework because lots of companies are using it. Thus, this framework could be useful for further analysis and application into the proposed framework of this study. Even though Malcolm McDonald is a well-known professor, his framework of strategic marketing planning may need more intensive research to be undertaken on it. There is a lack of academic research studies on this framework.

2.6.6 RACE strategic planning framework

RACE is a widely used digital marketing planning framework used to develop an overall digital strategic plan, and it is known sometimes as PRACE for simplicity (Chaffey, 2015a; HubSpot, 2015). PRACE, as Figure 2-33 shows, is an acronym standing for Plan, Reach, Act, Convert and Engage (Smith and Chaffey, 2013). PRACE was developed initially in 2010 by a company called Smart Insight as an evaluation of the REAN framework which is a later version of the AIDA model (mentioned in section 2.6) (Chaffey, 2015a). PRACE is a good tool to keep marketing tactics concentrated on content marketing which focuses on the customer (Smith and Chaffey, 2013).

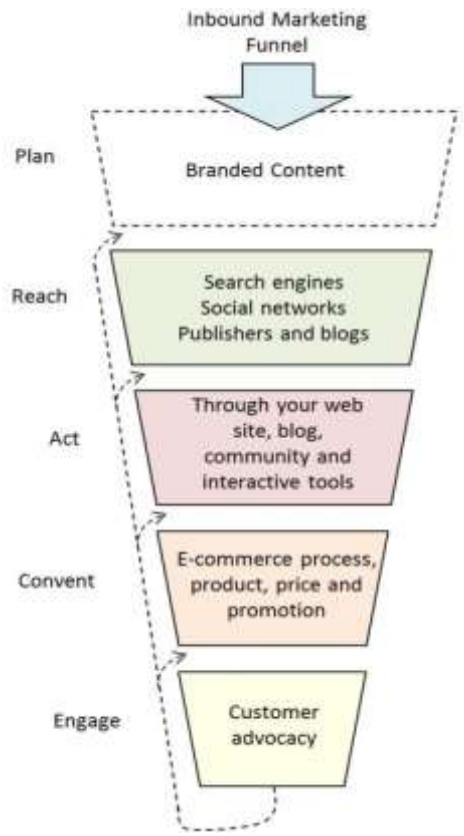


Figure 2-33 PRACE framework
(Source: Chaffey and Smith, 2008)

PRACE shares with SOSTAC (section 2.6.4) three fundamental points in its plan: opportunities, strategies and actions for each level of planning (Smith and Chaffey, 2013; Chaffey, 2014a).

Although PRACE uses (SWOT) situation analysis and recommends the use of SMART objectives, according to Dave Chaffey (2014) the fundamental points in this plan are: opportunities, strategies and actions. Also, the PRACE framework was designed by a company called Smart Insight and has been applied by many companies and organisations around the world (Smith and Chaffey, 2013); however, the intensive research undertaken for the present study has found no academic research or critical review study that has discussed this framework. Despite this, this study considered the advantages of this framework and the common aspects it shares with other models and frameworks. Therefore, this framework is also useful for further analysis and application into the proposed framework of this study.

2.7 Chapter conclusion

This chapter has reviewed the relevant prior research and studies related to the subject of this research and related matters in order to recognise the existing fundamental issues and to provide the theoretical ground for the primary and experimental studies involved in the development of the proposed framework.

Museums in Saudi Arabia have more than 50 years of history. The Saudi Association for Tourism Accommodation, which is formally responsible for all museums in Saudi Arabia, categorised museums in Saudi Arabia into three main sectors: national, state and private. Museums are playing a major role in learning about and maintaining the culture, according to the views of people engaged in the museum sector. Museums need to communicate with people to survive, but museums in Saudi Arabia are still very weak at engaging with people and they are still using just the traditional methods of marketing. While the internet infrastructure in Saudi Arabia is very good and is considered as one of the best out of all the Arab countries, the vast majority of museums in Saudi Arabia do not have any sort of web presence. In addition, they are still using just the traditional method of printed marketing.

Since the birth of the internet, marketing has dramatically changed. Web 2.0 and social media provide two-way communications which has resulted in a marketing shift from the concept of reaching people to the challenge of engaging with them. Despite the fact that Saudi Arabia is one of the highest social media users in the world, museums are still not taking full advantage of the internet and social media to promote themselves.

Using the internet and its new applications for marketing purposes requires some sort of specific experience. Understanding the principles of websites, social media platforms and their usage, online marketing tools such as email marketing and content marketing, digital branding, SEO and online marketing strategies is becoming an essential part of being successful at online marketing.

The literature is full of marketing frameworks and models, but the present research focuses just on those which are strongly related to fulfilling the main research aim. The DRIP marketing model, STP marketing strategy model, PRACE strategic planning framework, ASP marketing model, McDonald's strategic marketing framework and

SOSTAC marketing model have been reviewed in detail. Table 2-6 presents a brief overview of the models and frameworks and what elements they include.

Table 2-6 Brief findings from marketing models and frameworks

Elements	Model/Framework						
	DRIP	STP	RACE/PRACE	ASP	McDonald	SOSTAC	Proposed model/framework
Marketing strategy	✗	✓	✓	✓	✓	✓	✓
Vision/mission setting	✗	✗	✗	✗	✓	✗	✓
Goals/ Objectives	✗	✓	✓	✓	✓	✓	✓
Situation analysis	✓	✓	✓	✓	✓	✓	✓
Branding	✗	✗	✗	✗	✗	✗	✓
Content marketing	✓	✗	✓	✗	✗	✗	✓
Online marketing	✓	✓	✓	✓	✓	✓	✓
Online tools/platforms	✓	✓	✓	✓	✗	✓	✓
Marketing action	✓	✓	✓	✓	✗	✓	✓
Monitoring	✗	✗	✗	✗	✓	✓	✓
Designed for museum marketing	✗	✗	✗	✗	✗	✗	✓

This literature has identified the need for the design of a framework to be used for museums in KSA in order to develop their web usage to effectively promote themselves and to enhance their engagement with visitors. The literature has also found the gap in the existing related marketing models and frameworks which the primary research of this study will consider further.

The next chapter will look at the research methodology which is a key element in this research. The next chapter will describe and clarify methodologies used to fill the gap in knowledge that have been found in this literature. The researcher has proposed improvements to the existing related marketing models and amendment to develop them for the proposed framework.

CHAPTER THREE

METHODOLOGY

3 RESEARCH METHODOLOGY

3.1 Introduction

The methodology chapter is a key element in academic research. It sets out, describes and clarifies the methodology used in a study and also the rationale for choosing this specific approach. This chapter will present an overview of the inclusive process and various stages of the research, the essential factors upon which the research is based and the different methodological techniques that have been selected to gather appropriate and relevant information in order to achieve the objectives of the research. In this chapter, the researcher introduces the mixed methods approach used to investigate the design of a framework for assessing the web presence of museums in the KSA.

The methodology has been accurately built, keeping in mind the objectives of the research and the research questions to be answered. The specific research objectives have been leading factors in choosing a suitable research methodology for this study.

3.2 Methods and methodology definitions

Research methods are the different processes and procedures used in research. They include statistical approaches, numerical schemes, case studies, etc., used to help researchers to collect data, samples and find solutions to problems (Rajasekar et al. 2006).

Research methodology is a kind of analysis of the procedures of inquiry in a particular field; it has been defined as a “set or system of methods, principles, and rules for regulating a given discipline” (dictionary.com 2014). Following Crotty (1998), who defined it as “the strategy, plan of action, processor design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcome” (Crotty, 1998, p.3), Dictionary.com (2014) indicates that a methodology is not only a plain collection of methods, but also indicates the rationale of a field of study. The effective utilisation of methodologies involves adopting suitable methods and managing them correctly (Saarinen 1990).

3.3 Research methodological approach

The conceptual research framework in this study functions as a guide that provides boundaries and offers clarification for the series of methodological steps taken and the relation with the research methods used. A research methodological framework is the core centre or structure on which a research study is based (Bell 2005). Furthermore, according to Miles and Huberman (1994, p. 18) a research methodological framework as a process "explains either graphically, or in narrative form, the main things to be studied … the key factors, concepts or variables and the presumed relationship among them".

In accordance with the research aim, the study involves multidisciplinary areas and has required the development of a multi-stage research methodology to achieve the aim of this study. The researcher has produced a graphical representation of the proposed research methodology adopted in this study. Figure 3-1 gives a general overview of the methodological framework. The graphic presents a concatenated methodology that has been developed to carry out this research in an organised and orderly way through the different stages.

The multi-stage research methodology for this research, as mentioned above, was developed to describe the stages of the overall methodological framework of this study. The stages have been built in a smooth, logical and step-by-step style, to make it easy and understandable for the reader, as seen in Figure 3-1.

The first stage is an introductory observational case studies to examine the characteristics of existing web presence and engagement practice. Stage two describes a questionnaire survey with museum visitors in KSA to examine the perceptions of visitors on the existing web presence of the museum in KSA. This is followed by interviews with museum staff in KSA in stage three, to examine the perceptions of the museum staff and the thinking behind the existing web presence of the museum in the KSA. Stage four will be for interviews with museum stuff and field experts in UK to examine the perceptions of the museum staff and online marketing experts and the thinking behind the existing web presence of the museums in the UK. A theoretical framework for the effective use of web presence and associated online marketing strategy for museums in KSA is then presented in stage five. Finally, testing and evaluating the framework takes place in

stage six to assess the effectiveness of the designed multimedia-based framework for web presence and associated online marketing strategy for the museum in KSA.

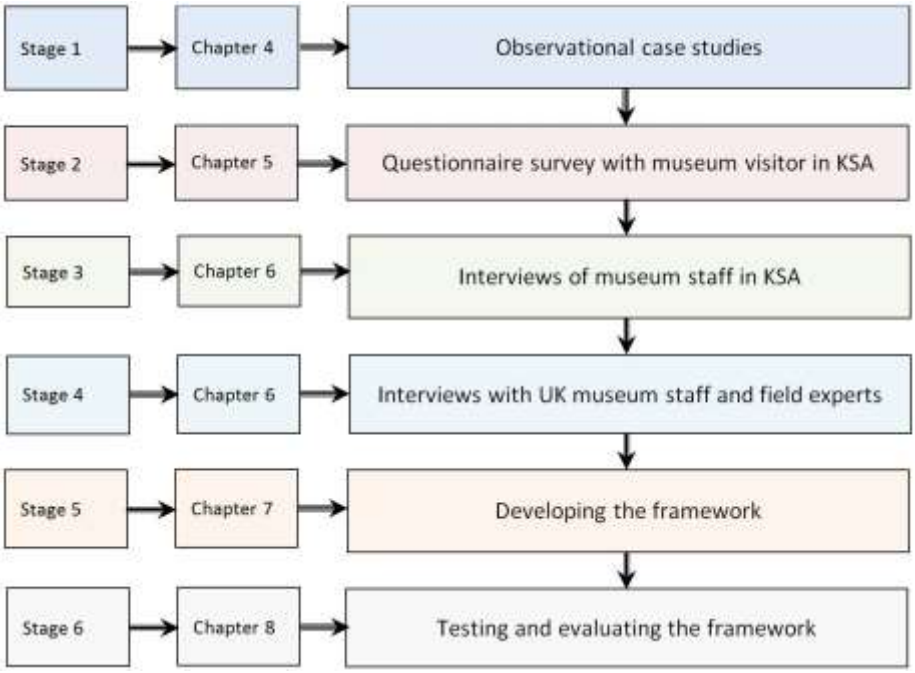


Figure 3-1 Research methodology stages

The table 3-1 below illustrates the different strategies used within the above stages.

3-1 Different strategies used within the research

Stage number	Analysing method
Stage 1	Museum's web-design features checklist Museum's web presence (website and social media) design layout and element Museum's web presence (website and social media) updating/changes frequency
Stage 2	Printed questionnaires
Stage 3	Face to face interviews
Stage 4	Face to face interviews
Stage 5	Developing the framework (Mentioned in detail in chapter 7)
Stage 6	Applying the framework and evaluating the results: • Museum visitor's data analysis • Web analytical data analysis • Online questionnaire • Phone interview

To examine the existing web presence of museum in KSA and UK, the researcher has chosen observational case studies. Observational case studies allow the researcher to collect accurate information and also reliable data which improves the precision and validity of the research results. It helps in understanding the existing web presence more efficiently for a longer duration of time. This method can identify a problem by making an in-depth analysis of the outcome data.

Examining the perceptions of visitors about the existing web presence of the museum in Saudi Arabia required a practical method to collect data from a large number of people in a short period of time, and in a relatively cost effective way. Choosing questionnaire survey here allowed the researcher to gain the required data within a minimum time period, as compared to interviews which take more time.

Face-to-face expert interviews were conducted to help with more in-depth screening. It is also affords the capture of non-verbal cues including body language, emotions and behaviours, which cannot be picked up by other method including questionnaire surveys. It is also gives the interviewer control over the interview and can keep the interviewee focused and on track to completion. These features influenced the researcher to use Face-to-face interviews with the museum's staff who are involved with the museum's web presence. The table 3-2, shows how different research methods that were used in fulfilling the objectives of this research.

This research has considered but rejected or limited a few methods due to time and subject limitations or contradictions with the research aims and objectives. For instance, to examine the perceptions of visitors about the existing web presence of the museum in KSA the researcher rejected the use of an observation tool to fulfil this objective because it cannot study the opinions of the museum visitors using observation alon. The researcher has, also, rejected the interviews because it limits the sample size and it is time consuming.

On the other hand, the researcher has used observation and interviews to examine the existing web presence of museum in KSA. Therefore the researcher has used different tools to understand and answer the research questions. The complete understanding and answering of the research objectives and questions cannot be obtained by the observation alone.

The researcher also has not used narrative studies or narrative analysis, as it requires an in-depth analysis and data from people's individual online experience. Unfortunately, this would have been a very difficult task to fulfil, as just few museums in KSA have existing online presence, and the quality of their online presence is poor.

Table 3-2 Research methods were used in fulfilling the objectives of this research

Objective	Methods used
To examine the existing web presence of museum in Saudi Arabia	• Literature reviews • Observational case studies • Interviews of museum staff in KSA
To examine the perceptions of visitors about the existing web presence of the museum in Saudi Arabia.	• Questionnaire survey with museum visitor in KSA
To review effective museum web presence and online marketing strategies within UK	• Observational case studies • Interviews with UK museum staff and field experts
To develop a multimedia-based framework for design web presence and associated online marketing strategy for museum in Saudi Arabia	• The outcome from secondary and primary data
To assess the effectiveness of the designed multimedia-based framework for web presence and associated online marketing strategy for the museum in Saudi Arabia using a KSA based case study	• Practically testing and evaluating with a museum in KSA

3.4 Selecting the research methods

Research methodology requires the analysis and examination of the theory of research methods. Tools and techniques, algorithms, schemes and procedures are considered as research methods (Rajasekar et al. 2006).

3.4.1 Types of research methods

Research methods can be quantitative, qualitative or combine both methods (known as mixed methods) (Rajasekar et al. 2006; Saunders et al. 2009). Generally, quantitative methods are used for studies that involve the measurement of something, and qualitative methods are used by researchers to understand some aspects of social

life; these methods deal with words more than numbers for analysis (Patton & Cochran 2002).

Different types of research methods have been used in this research. The initial research on the subject was carried out through collecting and analysing secondary data from books, articles, library databases, websites and other sources, and information was collected using qualitative and quantitative methods.

3.4.1.1 Quantitative research approach

The quantitative research approach helps researchers to analyse the data through statistical analysis and results in findings that can be generalised to a bigger population (Elliott 2005). Also, quantitative research deals with meaning and interprets data by means of numerical analysis and measurement, usually using mathematically based methods (Albayat, 2011; Hausmann, 2012).

This research used observational case studies and a questionnaire survey as methods to collect quantitative data. Empirical investigation through observational case studies elicited a large quantity of significant quantitative data associated with the research objectives. This data helped in building the next steps regarding the gathering of the primary data of this research (see Figure 3-1 above).

A questionnaire survey was also used to collect quantitative data. This method was very useful in the study since the survey covered different aspects related to the research subject. This research approach used structured questions to obtain exact answers related to museum web presence. The questions contained in the questionnaire aimed to collect responses from the participants by asking them to answer yes or no questions, or to choose from just a few options in how, why and what questions (see Appendix : B).

3.4.1.2 Qualitative research approach

The qualitative research approach comes from the context of cultural and social science and describes actions in a natural way (Myers & Avison 2002). In general terms,

qualitative information may be collected from observation and interviews, amongst other methods (Calvillo & Revlin 2005). Usually, qualitative research questions begin with 'Why?' and 'How?' and 'In what way?' This type of method gives the researcher a wide overview and understanding of the situation and why and how the situation is the way it is. It also provides in-depth data that are difficult to obtain with quantitative methods (Aggad 2012). Table 3-3 compares these two different approaches.

Qualitative data in this study were mainly collected using semi-structured interviews to give some freedom to the researcher to explore general ideas and opinions about the web presence of museums in Saudi Arabia, and to understand how it is managed and what strategies museums in the UK use to increase their engagement with the audience. Semi-structured interviews with experts offered plenty of flexibility for obtaining in-depth responses and provided the interviewees with the opportunity to share their practice and experiences in the field. At the same time, the structure worked to keep the interview process focused to cover all the important points and to understand the phenomena in a more holistic way (Gu 2012). Taking a form-structured approach, such as structured interviews, would not allow the researcher to obtain an in-depth understanding of what the museums in Saudi Arabia and the UK are doing.

Table 3-3 Comparison between the qualitative and quantitative research approaches

Elements	Qualitative	Quantitative
Data collection method	• Semi-structured and unstructured interviews • Observations • Focus groups • Case studies	• Structured interviews • Questionnaire surveys • Experiments • Case studies
Sample size	• Usually small	• Usually larger
Data collection	• It is conclusive • Applies statistics or mathematics and uses numbers	• It is exploratory • Applies reasoning and uses words
Data types	• Non-numerical • Descriptive	• Numerical • Non-descriptive
Analysing	• Non-statistical analysis •	• Numerical statistical analysis •
Results	• Difficult be graphed	• The results are often presented in tables and graphs
Investigates	• Why and how	• What, where and when

(Source: Rajasekar et al., 2006)

3.4.1.3 Mixed methods approach and triangulation

Mixed methods research is carried out by applying both quantitative and qualitative research methods in one research study. This application of different methods can be very important as it can allow the gathering of more comprehensive data to address different research questions that may be limited by the implementation of a single research approach (Altamimi 2013).

In this research, mixed methods have been adopted for use. Both quantitative and qualitative data were collected from the museum staff and visitors and analysed extensively in this research.

Triangulation is a tool used to detect the relationships, convergence and inconsistencies among the primary data. It combines quantitative and qualitative methods in examining the same research element (Hussein 2009). Triangulation is usually used with the mixed methods approach to gather more information and obtain an in-depth perspective on the research subject (Fields 2015; Al-Sobhi et al. 2009). It is also used to help researchers to compare collected data from different methods in order to enhance the accuracy of finding (Al-Sobhi et al. 2009).

The researcher used a triangulation method to corroborate the qualitative and quantitative method data collection and analysis and the other sources to enhance the credibility and interpretation of the findings. This is further shown in the diagram 3-2 below;

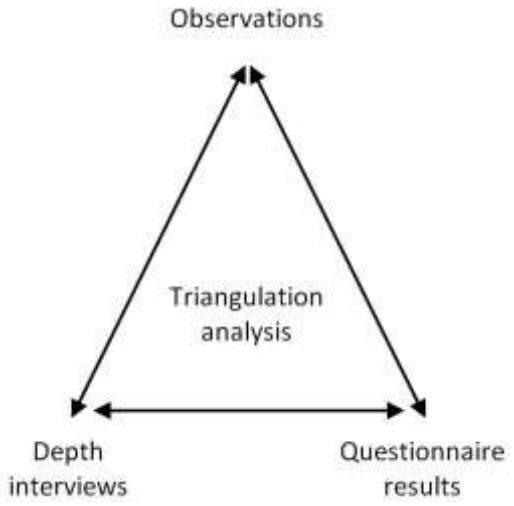


Figure 3-2 Diagram showing three different research techniques being linked through triangulation analysis

3.5 The rationale for combining methods

This research adopted a mixed methods approach to allow the researcher to use quantitative and qualitative methods to investigate web presence. Weinreich (2006) confirmed that both qualitative and quantitative approaches have positive attributes, and that combining both can result in taking advantage of the best aspects of both. Furthermore, a mixed methods approach was applied because it helped investigate the impact of the internet and social media from two different viewpoints: the viewpoint of the target audience of museums' web presence and the viewpoint of museum stuff and online marketing experts. The primary research carried out was based on quantitative and qualitative methods.

Malhotra and Birks (2007) indicated that questions that relate to plans and corporate performance are examples of sensitive questions, so asking the participants these questions will give the researcher the opportunity to collect more important and relevant data. In addition, qualitative research can explain and elaborate upon quantitative findings. Moreover, it is very important for this research to be based upon gaining a comprehensive and complete picture of the context of the web presence of Saudi Arabian museums and their performance and engagement with their audience.

The researcher determined that there is a gap in the literatures research on web presence in Saudi Arabia, particularly in the context of museums. It was important to be able to talk to the museum staff about the web presence of their museum. For this reason, a qualitative method was used to answer the research questions which aimed to investigate what are the operational modalities of the existing web presence of museums in Saudi Arabia, and the web design strategies used by UK museums to effectively engage with and increase their number of visitors.

On the other hand, this research also used quantitative methods to collect data from museum visitors in Saudi Arabia using a questionnaire survey. As some of the objectives of this study relate to the usage of museum websites and social media, the use of different approaches can therefore provide a deeper and more comprehensive understanding of the research area. Also, applying mixed methods for data collection introduced the researcher to the use of "triangulation" in research to increase understanding and the accuracy of the study (Hussein 2009).

3.6 Focus group

Focus groups are “prearranged meetings with targeted individuals”. They are dynamic group discussions used to collect information (Harrell and Bradley 2009). Bryman (2016) states that the importance of focus groups for specific topics is because of contrasting group interviews, in which the subject can be very wide-ranging. Focus groups can save researchers money and time because they gather information from many individuals at the same time. This can be of great benefit to the research, as individuals might share ideas and opinions regarding the research subject (Almebati, 2016).

The researcher conducted two focus groups with a group of design and marketing professionals in KSA to help him develop the selected museum’s website.

A meeting with seven design professionals and academics from design school at Taibah University in Al-Madinah city was arranged to take place two times, the first time was to analysis of the current Dar Al-Madinah museum’s website and the second time was after developing the new potential website, taking into the consideration the comments that have given in the first meeting. The arrangement of the meetings was through the head of the department by finding the suitable time and venue was the school meeting room.

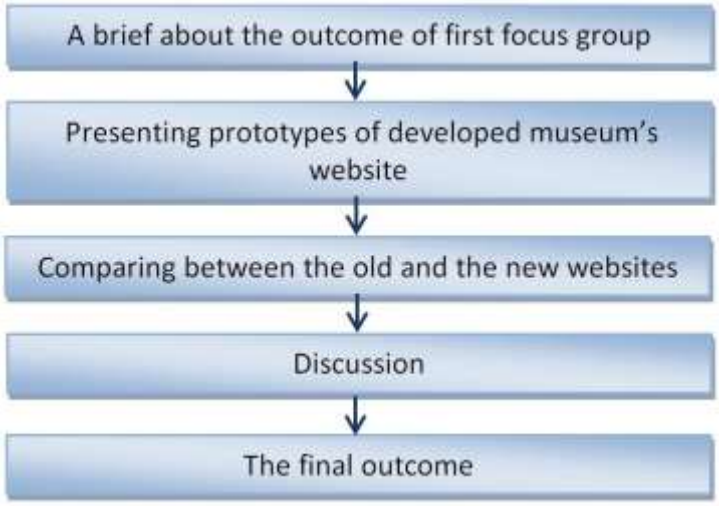
The aim of the first focus group was to find and to support the outcome of applying the checklist on the design of the museum existing website. It was also, and perhaps the same important, to hear the professional opinion and feedback on the museum existing website. The aim also was to gain this feedback on the proof-of-checklist developed in chapter four and to develop the museum current website upon them. The duration of the first focus groups was about an hour and a half.

The first focus groups started by giving the participant a brief about the research and an overview about the museum. Then the researcher showed the participant the existing museum’s website to stimulate the discussion. And by the end of this discussion, the researcher presented the outcome from applying the checklist on the current museum’s website. The group discussed the two outcomes together and came up with final outcome of the first focus group which mostly agreed with the outcome of the checklist. The researcher has written all notes given from the participants.

The second focus group was with the same participants in the same meeting room on 8th September 2015. The aim of the second focus group was to discuss applying the outcome of the first focus group. The second focus groups started by giving the participant a brief about what happed in the first focus group. Then the researcher started showing the participants two prototypes (A and B) of potential developed museum's website. The participants, after discussion, have chosen design B with minor changes. The researcher has written all notes given from the participants. The duration of the second focus groups was about an hour and a half too.

Diagrams 3-3 and 3-4 below present professional focus group SOP.

3-3 The first focus group SOP



3-4 The second focus group SOP

3.7 Sampling

A research sample consists of people who represent the target population (Amer 2009). The sample as a portion of the population is used to determine a target population's characteristics in order to gather the relevant information needed to achieve the research objectives (Bryman, 2004; Mugo, 2010, cited in Allu, 2014). The target population for this research are people visiting museums in the KSA, museum staff in the KSA and the UK, and online marketing experts in the UK selected for the purpose of this research. This target population enabled this study to obtain information related to the problem of this study, and to identify the gap in the museum web presence practice in Saudi Arabia. Also, this target population enabled the researcher to find better examples of practice regarding how to design the web presence.

The research sample has to represent the research population to make sure that the information the researcher gathers from the sample is typical of the wider population (Allu, 2014). Since this research is limited by funds and time (see section 9.4), choosing a sampling method depends on what methods best suit this research, taking into consideration these limitations. Sampling methods are selection processes used to select a small group out of a large group; they can be mainly divided into two types of sampling:

1. Probability (random) sampling.
2. Non-probability (non-random) sampling (Walliman 2010; Amer 2009; Daniel 2012).

Probability sampling is based on using random methods to choose the sample. According to Walliman (2010), the most reliable representative sample of the population is obtained from this type of sampling. There are four main types of probability sampling:

1. Simple random sampling
2. Stratified sampling
3. Systematic sampling
4. Cluster sampling

Non-probability sampling is based on choosing a sample by non-random methods. It is helpful for pilot studies, case studies and qualitative research in general (Amer 2009; Walliman 2010). There are four main types of non-probability sampling:

1. Accidental sampling / Convenience sampling
2. Quota sampling
3. Snowball sampling
4. Judgment / Purposeful sampling

Table 3-4 presents a brief overview of sampling types and their characteristics.

Table 3-4 Research sampling types

Main types of sampling	Types	Characteristics
Probability (random) sampling methods	Simple random sampling	Everyone has equal chance of being selected
	Stratified sampling	It is a type of simple random sampling selected from a subset segment of the targeted population
	Systematic sampling	It involves random selection at fixed or systematic intervals
	Cluster sampling	Samples selected randomly in natural aggregates
Non-probability sampling methods	Accidental sampling/ Convenience sampling	Selecting what is immediately available
	Quota sampling	Uses the same proportions as the population proportions on easily identified variables
	Snowball sampling	Samples chosen from participants' suggestions
	Judgment / Purposeful sampling	Choosing the people whose opinions are important to the research

Source: Developed by the researcher, 2015, from: Latham (2007); (Amer 2009; Daniel 2012; Walliman 2010; Harrell & Bradley 2009; Latham 2007)

In Onwuegbuzie and Collins' study (2007, p.282) titled "A Typology of Mixed Methods Sampling Designs in Social Science Research", they argued that both probability and non-probability sampling can be used in mixed methods research. According to Walliman (2010), non-probability sampling is the best sampling method for any particular research with targeted participants.

Although this study supports their argument, it was most suitable to use both probability and non-probability sampling to select the research samples. Purposive non-probability sampling was adopted for the interview samples (as this was a very defined and targeted population in order to explore this specific groups opinion) and probability sampling was adopted for the questionnaire sample (due to a desire to obtain a general view of the population). A simple random sampling technique was adopted for the questionnaire sample to gather both qualitative and quantitative data. Judgment sampling was adopted for the interview samples to collect qualitative data (see table 3-3).

3.7.1 Selection of participants

The participants in this research were museum visitors in Saudi Arabia, museum staff in Saudi Arabia and the UK, and online marketing experts in the UK as mentioned earlier. They were selected based on the aim and objectives of this research. Two museums in Saudi Arabia and two museums in the UK were selected for interviews and same two museums in Saudi Arabia were selected for the application of the questionnaire survey (further details are provided in section 3.8).

As mentioned in section 3.7, simple random sampling was chosen to select the questionnaire sample as follows:

- Date: 13th to 24th August 2014.
- Place: The National Museum of Saudi Arabia and Dar-Al-Madinah Museum, Madinah, Saudi Arabia.
- Time: the questionnaires were distributed between 10:00am-12:00 noon and 5:00–10:00pm every working day.
- As this is a random sampling, every visitor was given a chance to participate by giving him/her a hard copy of the research ethics form and questionnaire with a brief description; and
- Enough time was given to each participant to fill in and return the research ethics form and questionnaire, without forcing him/her to participate.

On the other hand, for the interviews, the professional position of the staff and their opinions, was a consideration for selecting any of the potential participants. Therefore, judgment sampling (non-random) has used in selecting participants for the interviews. The following sequential steps were applied before the interview:

1. Each targeted museum was contacted via phone/email.
2. Museums that responded were contacted again to make an interview appointment.
3. The interview was conducted.

A Standard Operating Procedure (SOP) was applied for the interview process (further details in section 3.13). A summary of the number of participants and the selection methods at the different stages of this study is shown in Table 3-5.

Table 3-5 The number of participants and research tools used in the different stages of this research

Participants	Number	Selection method
Museum visitors (the KSA)	56	Random sampling
Museum staff (the KSA)	6	Judgment sampling
Museum staff (the UK)	2	Judgment sampling
Online marketing experts (the UK)	2	Judgment sampling

3.8 Rationale for choosing the selected museums

3.8.1 Selecting participant museums in Saudi Arabia

As this research is about web presence, every museum that has a website or social media account was eligible to participate in this research. Museums that have no web presence were excluded from the research sample. There were five museums with a web page or social media account from a total number of 138 museums in Saudi Arabia (see Appendix: A). Web presence includes websites and/or social media platforms; this means that there are just five museums which could have been potential participant museums in Saudi Arabia. The five museums are: The National Museum of Saudi Arabia in Riyadh, Madinah Media Museum in Madinah, Dar-Al-Madinah Museum in Madinah, The Dinar Islamic Museum in Makkah and Astronomy and Space World in Madinah. The map in Figure 3-5 shows the three cities where the four museums are located in Saudi Arabia.

Figure 3-5 Saudi Arabia map
(Source: http://www.ezilon.com)

The researcher contacted all the five museums via email and received two positive responses and three negative responses. The two positive responses (from one museum in Riyadh and one museum in Madinah) conveyed that they were happy to participate in the research. Therefore, the research selected Dar-Al-Madinah Museum and The National Museum of Saudi Arabia, as they showed a deeper understanding of the research issues and more readiness to participate in this study. The map of the KSA in Figure 3-5 shows the location of the two cities where the selected museums are located.

3.8.2 Selecting participant museums in the UK

On the other hand, a different method was used to select museums in the UK. There are a huge number of museums with web presence in the world in general and in the UK in particular. Due to the limitations of this study (see section 9.6) the research focuses on museums in the UK for face-to-face interviews and museums in the rest of the world for other interview methods such as phone interviews or online communication. However, museums in the UK and USA are the most actively users of the web 2.0 tool among other European countries (López et al. 2010).

Language matter is another limitation that was considered when choosing the participant museums. The research excludes all non-English-speaking museum staff (see section 9.6). The researcher applied the following method in choosing the selected participant museums:

1. The UK's best-rated museums were identified by a well-known website called TripAdvisor (Coleman 2014).
2. The most popular museums in the world were obtained from ready-made lists such as: AECOM (the global network of experts), Alexa ranking, SimilarWeb and the Daily Mail list (Hills 2016; Shankman 2013; SimilarWeb n.d.; Alexa n.d.).
3. The museums were analysed according to their web presence engagement (social media engagement such as Facebook and Twitter). They were further ranked using index of popularity such as Facebook likes, comments and Twitter number of followers.
4. The best museums were contacted and asked to participate in the study.

5. Museums were contacted that have a relationship with the research supervisor or are part of the network of the researcher's supervisor.

The researcher contacted all of the selected museums via email and asked them to participate in this research. Responses varied as follows:

- No answer
- Auto reply: will answer ASAP, but with no follow up response
- Auto reply: will answer ASAP, but later said we are unable to help
- We are unable to help
- Passed the email and contact information to the relevant department/person, but no answer
- completed the questionnaire online
- Started the questionnaire online, but did not complete
- Agreed to participate

The final choice of museum was made by the researcher based on museums that agreed to participate ether online or face to face.

3.9 Methods of statistical analysis

Quantitative data were analysed using SPSS In order to understand the different engagement levels resulting from the proposed developed framework. A statistical test was carried out to measure the variation levels in the data and assess their significance (Cvijikj et al., 2012). Choosing the right statistical test in SPSS depends on the data's characteristics. The first test, called the normality test, was needed to confirm the data's independent variables. The two main techniques in statistical data analysis, parametric and non-parametric, can be identified by this normality test (Field, 2009 in Alghamdi 2016). Table 3-6 presents different SPSS tests depending on the normality test.

Table 3-6 Some parametric and non-parametric tests

Comparison	Parametric tests	Non-parametric tests
Data distribution	Normal	Normal or not normal
Measure of central tendency	Mean	Median
Type of data	Continuous (Interval–Ratio)	Nominal or ordinal
One sample group	One-sample t-test	Sign test
Two independent groups	Two-sample t-test	Wilcoxon-rank test or Mann-Whitney U test
Correlation	Pearson	Spearman

(Source: Alghamdi 2016)

For the purpose of this research, there are two independent groups in the primary data, those before and after the proposed framework was tested. The two-sample t-test was therefore used where the data was distributed normally (i.e. it was parametric), and Wilcoxon-rank test or Mann-Whitney U tests were employed if the data was not distributed normally (i.e. it was non-parametric). Figure 3-6 shows the selection of the appropriate test depended on the type of data.

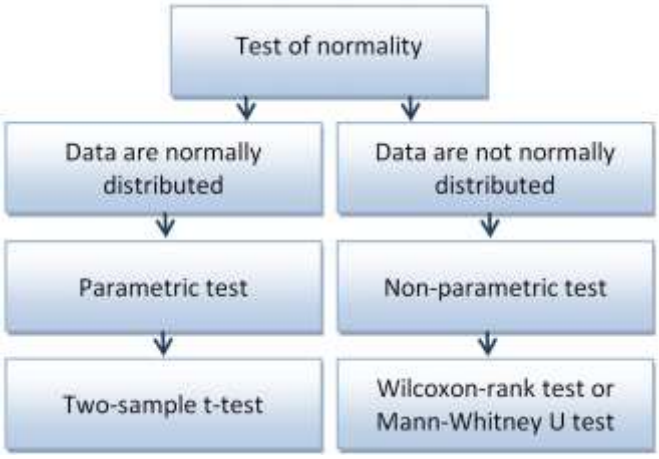


Figure 3-6 Selection of the apporpriate SPSS test
(Source: Alghamdi 2016)

Table 3-7 shows a sample outcome of the normality test's application. The Shapiro Wilk test is used for datasets such as the present one that are smaller than 2,000 elements, and the Kolmogorov-Smirnov test is applied to larger datasets. Sig. is the key figure in this test: a sig. value of more than 0.05 means that the data is distributed normally, in which case the parametric test is used, while a sig. value of less than 0.05 means that the data is not distributed normally, so a non-parametric test is applied. In this example, the p-value is 0.436, which means that the data is distributed normally.

Table 3-7 Normality test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
DATA	.100	30	.200	.966	30	.436

3.10 Validation

The questionnaire survey and the interview questions were sent for peer review to two of the researcher's colleagues and then to the researcher's supervisor. The peer reviewers were PhD researchers in the same department as the researcher who were conducting research in similar areas, and consequently they understood this type of research and methods. These reviewers were asked to express their opinions about the questionnaire items and whether the questions reflected the aim and objectives of the research.

3.11 Control group

According to oxforddictionaries.com, a control group in research is "A group acting as a control in an experiment; especially a group of people participating in a study or trial who, typically without their knowledge, serve as a control by not being given the treatment being tested". In this research, the control group within the study will be defined as control data (baseline data) which is "data used for identifying, selecting, executing or modifying another set of data" (thefreedictionary.com, N.D)

Baseline data in this study used in measuring the effectiveness of the designated framework. Baseline data will be collected before applying the designated framework to compare it with the data collected after applying the framework using SPSS software. (For further detail see chapter 8)

3.12 Evaluating the outcomes

Monitoring of any intervention process, such as theoretical framework for design of the web presence, is vital to ensure and determine if the process has worked and to help further design and refine delivery. The evaluation of the outcome in this study involved using control group data and also a satisfaction survey post implementation.

Evaluating the framework will be through implementation of the framework and then evaluating the outcomes of this implementation. The statistical results will be analysed using Statistical Package for the Social Sciences (SPSS) software. In addition to SPSS, the researcher will also triangulate evaluation with, Twitter survey questionnaire and informal qualitative feedback from the museum management. This allowed feedback from not only end users such as the online social media audience but also physical audience feedback via museum management.

3.12.1 Twitter survey

Twitter poll survey is a new, fast and reliable way to engage the Twitter huge audience for one question. It is the best method for asking particular account followers to answer a particular question. Twitter poll survey has used in this researcher as a question survey in order to gather a primary quantitative information about the effectiveness of the new web presence associated online marketing strategy. Further analysis of this survey if found in section 8.3.4.

3.12.2 Qualitative feedback

In addition to statistical analysis, further qualitative feedback will be applied in order to enable triangulation of the framework evaluation outcome.

3.13 Standard Operating Procedure (SOP)

Standard Operation Procedure, known as SOP, is a principle working guide tool that can help in ensuring the quality process and technical plan (United States Environmental Protection Agency 2007). Using SOP in research interviews ensures that the same process is conducted with each participant in order to maximise the uniformity of the research and the reliability of the research outcomes (Chen 2010). The researcher has developed a SOP and implemented it through conducting the interviews with the participant (see the research interviews SOP in Appendix: F).

3.14 Ethics report

Ethical consent was discussed and approval was granted by De Montfort University prior to starting the questionnaire survey and interviews (see the Ethics

consent form in Appendix: C). The identified ethical issues were associated with administering the interviews and questionnaires to adults. The following assurances were provided in the ethics report: Participation in the research will be voluntary and is based on informed consent. Participants' identities will be protected according to the principles of confidentiality and anonymity. The data obtained from the study will be kept confidential and participants will remain anonymous in any reported findings from the research. The research process will respect the privacy of individuals, avoid undue intrusion and avoid emotional harm or upset to those taking part. Data from the research will be stored securely in line with data protection principles, and will not be passed on to third parties. The research will be conducted with integrity, including fair and honest treatment of the data, open dealings with participants, the declaration of any sponsorship or vested interests, and the avoidance of any plagiarism. Finally, the research will comply with the law in all relevant respects.

The ethical issues were addressed according to the ethical code and checklist of the Faculty of Art, Design and Humanities (A,D&H) through the ethics committee in July 2013.

3.15 **Pilot testing**

A pilot test was carried out and analysed before the full survey in order to validate the coverage of the interview and the questionnaire. The results obtained from the pilot testing helped in testing and measuring the collected data and allowed a new version of the interview and the questionnaire to be developed in order to be more workable and reliable. In addition, it helped in understanding what the participants liked and what they did not like about the questions.

The pilot survey was administered to a number of relevant populations and used the same sampling methods as the full survey: simple random sampling for the questionnaires and judgement sampling for the interviews (see section 3.7). The pilot survey was carried from 13th to 24th April, 2014 at Dar-Al-Madinah Museum, Al-Madinah, Saudi Arabia.

Two face-to-face interviewees representing 50% of the intended interviewees were interviewed. There were a total of 23 semi-structured interview questions. Each

interview lasted between 25–30 minutes. In these interviews, purposeful qualitative sampling, typical case sampling, was used to select the interviewees. These two interviewees were chosen individually, one participant at a time, and were asked semi-structured interview questions. As this was a sample of two interviewees from a total research case population of five, this number was sufficient for pilot interviews.

The pilot survey provided the researcher the opportunity to look again at some of the questions. Some questions were found to be unnecessary because they were asking whether the museums have a website or social media platforms, but these museums had been chosen because they already have a website and social media. Therefore, there was no need for these questions. Also, some questions in this survey needed to be reordered.

A total of 20 questionnaires were distributed and a total of 10 questionnaires were returned, suggesting a 50% success rate.

Feedback from the questionnaire included the following: rewording of some questions, merging questions 1 and 2, removal of some questions, and the addition of two questions to reflect on website and social media presence. These adjustments to the pilot questionnaire thus made the final questionnaire (see Appendix B) clearer and simple, as was suggested by Denscombe (2007). Overall, the pilot survey improved the quality of the research instruments employed.

3.16 Chapter conclusion

This chapter has presented the research methodology and methods used in this research. As this study required more than a single method of inquiry, a mixed methods approach was chosen for this research. Primary data were collected by using qualitative and quantitative approach, using three tools: a questionnaire survey, face-to-face interviews and observational case studies. The practical details of each method and the related primary data and analysis will be discussed in the relevant sections in Chapters 4, 5 and 6.

Thus, a triangulation of mixed methods was adopted to gather more information and obtain an in-depth perspective on the research subject. In addition, this approach helped the researcher to compare collected data obtained from different methods in order to enhance the accuracy of the finding.

The researcher also validated the questionnaire survey and the interview questions through peer reviewers and the researcher's supervisor to make sure that the questions reflected the aim and objectives of the research. Also, SOP was used in the data collection to ensure that participants were subject to the same procedure to maximise the uniformity of the research and the reliability of the outcomes.

Furthermore, the limitations of the research methodology and how the researcher addressed the ethical issues of the study according to the standards of De Montfort University's ethics form were discussed in chapter 9 in section 9.6.

CHAPTER FOUR

OBSERVATIONAL CASE STUDIES AND ANALYSIS

4 OBSERVATIONAL CASE STUDIES AND ANALYSIS

4.1 Introduction

In this chapter, the researcher set out to observe in depth, web presence of selected museums in Saudi Arabia and the United Kingdom. This in depth study supported the critical review in chapter two and provided a helpful contribution to building other quantitative and qualitative data collection methods of this research (as mentioned in chapter three). In order to conduct the observational case studies, the researcher has selected four museums, two from Saudi Arabia and two from the UK (for details see section 3.8) listed below:

1. The National Museum (http://www.nationalmuseum.org.sa)
2. Dar Al-Madinah Museum (http://www.daralmadinahmuseum.com)
3. Birmingham Museum & Art Gallery (http://www.birminghammuseums.org.uk)
4. National Space Centre (http://spacecentre.co.uk)

Table 4-1 below shows the selected museums and their country and what web presence they have.

Table 4-1 Selected museums details

Museum name	Country	Website	Social media		
			Twitter	Facebook	Others
The National Museum	Saudi Arabia	✓	X	X	X
Dar Al-Madinah Museum	Saudi Arabia	✓	✓	✓	Instagram & YouTube
Birmingham Museum & Art Gallery	United Kingdom	✓	✓	✓	Pinterest
National Space Centre	United Kingdom	✓	✓	✓	X

The observational case studies of these museums web presence illustrated the engagement and progress situation. This study focused on the website and most popular social media platforms as mentioned in section 2.3.4 which also are the common social media platforms for the selected museums; Facebook and Twitter. The observation duration for the website was eleven month from 21/04/2015 till 21/03/2016. And for social media was just less than two month from 27/10/2014 till 23/12/2014.

Three strategies were used to evaluate web presence for the above four museums.

1. Website design analysis: This was performed by using museum web design checklist, main page design layout and element and finally website updating/changes frequency.
2. Facebook presence analysis: Facebook page profile design elements and in depth Facebook activities observation using Facebook analysis sheet (refer to appendix H for example)
3. Twitter presence analysis: Twitter page profile design elements and in depth Twitter activities observation using Twitter analysis sheet (See appendix H for example)

The above process is graphically illustrated in table 4-2 below

Table 4-2 Three strategies of evaluating the web presence

The web presence	Analysing tool
Website analysis	A: Museum's web-design features checklist
	B: Main page design layout and element
	C: Website updating/changes frequency
Facebook analysis	A: Facebook platform profile design elements
	B: In depth facebook activities observation
Twitter analysis	A: Twitter platform profile design elements
	B: In depth twitter activities observation

4.2 Case studies protocol

To organise this study, first of all a case study protocol was developed about how to observe and analysis the museum's websites, Facebook and Twitter profiles. This has been briefly mentioned above. The researcher will now explain in further detail what this process entailed. The four museums were designated case study 1 to 4. The National Museum, the observational case study focused just on the website as they do not have any social media platforms.

Each case study was structured to start with the website analysis, Facebook and finally Twitter analysis. Each case started by giving a brief introduction about the museum as well each sub-section started with general background information to provide a brief overview.

4.2.1 Website case study protocol

The main elements of museum website presence are as shown below in subheading:

A. Website analysis – Website observational procedure

B. Main page design layout and element

C. Website updating/changes frequency

The researcher used a variety of tools in order to fully analyse the separate elements A, B and C. "Who.is" IP tool was used the grab the website relative information and overview. Also, Google Mobile-Friendly Test has been used to examine if the website is Mobile-Friendly or not. "Alexa", "Similar Web" and "WMTips" were used to find the relative information about a particular website. Visualping.io was used to monitor website changes frequency. Table 4-3, shows tools used in this section and the main purpose of using them.

Table 4-3 The website examine tools and purpose of them

The tool name	Purpose of use
Visualping.io	monitor the website changes
Who.is	The website information
Google Mobile-Friendly Test	To examine if the website is Mobile-Friendly or not
Alexa	The website information
WMTips	The website information
Similar Web	The website information
archive.org	The website archive

SPSS was used for statistical analysis of above quantitative data which was generated from the observations.

A: Website analysis – Website observational procedure:

The websites were analysed through evaluating the museum's website using the Museum's web-design features checklist (see Table 4-4, Table 4-5, Table 4-6 and Table 4-7), which was developed by the author from nine of the most popular website design checklists from 2008 till 2014 for; Stokes(2008); Park and Uribe(2008); Jurmann(2008); Meyers(2009); Gaffney(2011); The Saylor Foundation(2011); Conway(2011); Mohamadesmaeil and Koohbanani(2012) and Morris and Ed (2014).

Table 4-4 Museum's website checklist part 1

Category/Feature	General elements For the whole website
Domain and URL	□ Meaningful domain name □ User-friendly domain name □ Clear domain name □ Descriptive domain name
Design and layout	□ Design with clear goals □ Branding consideration □ Keep design file size small □ File name structure □ Avoid heavy page loads □ Minimal loading time □ Ads and pop-ups are not recommended □ Minimal or no usage of Flash □ Attractive and trendy design □ Consistent design □ Design matching the museum collections □ Simple structure layout □ Layout easy to use by bandwidth users □ Clear layout □ Liquid and responsive layout □ Compatible across a range of browsers □ Optimised page size □ Mobile-friendly website □ (HTML5/or latest)
Images, graphics and media	□ High quality (professional) images □ Customisable image naming and tags □ Not too many graphics □ Provide text with any non-text content □ Easy to skip multimedia □ All graphic links available in text □ Avoid unnecessary animation

Table 4-5 Museum's website checklist part 2

Category/Feature	Homepage	Sub-page	
General	□ Grab attention within 5 seconds □ Major headings are clear □ All major parts accessible □ Menus top or top right □ Menus consistent □ Elements should be distinct □ Elements should be easy to find □ (Accessibility)Font size AAA □ Policies and roles	□ Clear link to the home page □ Features are genuine on each page □ Major headings are clear □ All major parts accessible □ Elements should be distinct □ Elements should be easy to find	Common for all sub-pages
Museum name and logo	□ Prominent □ Consistent □ In top right corner	□ Prominent □ Consistent □ In top right corner □ Linked to the home page	
Navigation	□ Easy to use □ On top left or right	□ Easy to use □ Clear current location □ On top left or right	
Hyperlinks	□ Not many links □ If needed, link to credible third party references □ Links to partnerships/Sponsors	□ Distinct □ Easy to identify □ Titled with what they refer to □ If needed, link to credible third part references □ Not too many links	
Buttons/icons	□ Reasonable buttons size □ Social media tool icons □ Museum main sections □ Partnerships or/and Sponsors	□ Reasonable button size □ Social media tool icons	
Sitemap	□ Link if necessary/available	□ Link if necessary/available	
Online help (chat)	□ Link if available	□ Could linked from "Contact us" □ Could be a small window	
Search box	□ On the top □ Easy search features	□ On the top □ Easy search features	
Colour	□ Consistent □ Readable colour contrast □ Effective colour scheme □ Standard colours in text (Maximum 3 colours) □ Sufficient white space		
Images, graphics and media	□ High quality images □ Customisable image naming and tags □ Not too many graphics □ Provide text with any non-text content □ Easy to skip multimedia □ All graphic links available in text □ Avoid unnecessary animation		
Museum slogan	□ Museum slogan if available	□ If wanted	
Welcome text (Introduction/Key message)	□ If available	Not needed	

Table 4-6 Museum's website checklist part 3

Main museum sections	□ Links/Icons/Buttons or pictures	□ Related information and/or collection and/or media □ History of Collections	Important elements
Museum news	□ Links/Icons/Buttons or pictures □ Just main news on the home page and links to the news page	□ All news □ linked to "About us"	
Museum's coming-up "events and activities"	□ Links/Icons/Buttons or pictures □ Just main events on the home page and links to the events page □ Link to events page	□ All past and coming events □ linked to "About us" and/or "Visit us" □ Museum's calendar □ Partnerships or/and Sponsors if available	
Shop	□ Links/Icons/Buttons or pictures □ Could be on the home page and links to the shopping page	□ Opening times □ Items pictures and details □ Items prices □ Shopping basket □ Payment secure system □ Delivery information □ Returns and refunds	
Gallery	□ Links/Icons/Buttons or pictures □ Could be on the home page and links to the Gallery	□ Well-categorised □ High quality graphics	
Join newsletter or RSS subscription	□ Links/Icons/Buttons/Bar	□ Successful joint message and/or email	Recommended
Membership account sign-in	□ Links/Icons/Buttons/Bar	□ Successful joint message and/or email	
User feedback	□ Links/Icons/Buttons/Bar □ Could be linked from "Visit us" and/or "About us"	□ Successful reception message and/or email	
3D virtual view	□ Links/Icons/Buttons or a picture □ Could be linked from "Visit us" and/or "About us"	□ Not needed	If wanted
Donation	□ Not needed or □ Could be Links/Icons/Buttons	□ Secure page □ Successful and Thank you reception message and/or email □ Could be linked from "Visit us" and/or "About us" and/or Event page	

Table 4-7 Museum's website checklist part 4

"Contact us"	◻ Links/Icons/Buttons	◻ Prominent information ◻ Many contact methods ◻ Phone ◻ Email/s ◻ Address ◻ Post box ◻ Social media	Not all have to be on the main page
"Visit us"	◻ Links/Icons/Buttons ◻ Could be Links/Icons/Buttons from "Contact us" page and/or "About us"	◻ Museum address ◻ Museum location map ◻ Museum facilities (e.g. toilets ... etc.) ◻ Opening times ◻ Online ticket fees(If available) ◻ Group visiting details ◻ Group visiting information ◻ linked to "Contact us" and/or "Opining times"	
"Opining times"	◻ Links/Icons/Buttons/Information ◻ Could be Links/Icons/Buttons from "Contact us" page and/or "Visit us" page	◻ Link to "Visit us" and/or "Contact us" and/or "About us"	
"Our history"	◻ Links/Icons/Buttons ◻ Could be Links/Icons/Buttons from "About us" page	◻ Link to "Visit us" and/or "About us"	
"About us"	◻ Links/Icons/Buttons	◻ Introduction about the museum ◻ Informative ◻ Link to news page	
Fees and offers	Not needed	◻ Group visiting information ◻ linked to "Contact us" and/or "Visit us" and/or "Opining times" and/or "About us"	
Downloads	◻ Links/Icons/Buttons ◻ Could be linked from "Visit us" and/or "About us"	◻ Brochures ◻ Publications ◻ Guidelines ◻ Maps ◻ Applications/Apps in available	

B: Main page design layout and element:

The websites main page design was analysed for positive and negative design layout. Websites are judged by the design layout of the main page and its elements, without looking into the quality of the content; if the website's layout is not attractive to users, visitors will not wish to revisit (Website Gear 2003). The website visitors easily judges the website within millisecond through the overall visual design (Mountassir 2012). As the contents are subjected to the museum collection, this section focused on observing the overall layout and the frequency of updating the website. The overall website design layout was studied through the checklist for the evaluation of museum

website design which was developed in the following section to ensure the success of audience online engagement for museums.

C: Website updating/changes frequency

Each case study museum website was reviewed daily during the study period previously to monitor for any updates or changes to the website. This was performed to enable any patterns of good practice to be established. Unfortunately, due to access limitations, the number of visitors to each website could not be ascertained except for case study two (Dar Al-Madinah museum), (see section 9.6).

The frequency of updating or changing in the website was measured using an online tool called "Visualping.io", as mentioned in 4.2.1, to help in detecting and monitoring the website changes.

4.2.2 Social media Observational protocol

Social media, Twitter and Facebook, are observed and analysed through two main steps:

A. Social media platform profile design elements, and
B. In depth social media activities observation.

The researcher used a variety of tools in order to fully analyse the separate elements A and B. Multiple tools were used the grab the social media platforms relative bachground information and overview as described below;

1) LikeAlyzer: is a free to access Facebook analysing tool. It gives score on Facebook page usage. It graded pages from 0 to 100, the hire the score, the better. LikeAlyzer can help the study by draws the attention to the areas may need to focus on. It is also analyses the Facebook page to assess how well it performed in relation to other pages.
2) Fanpage Karma: is a paid tool come with a free version that provides a fairly detailed analysis of Facebook Pages and Twitter and a comparison with other competitors. Fanpage Karma shows an initial table for Key Performance

Indicators (KPIs). This gives an initial assessment of the page based on certain metrics and provides an overall page performance score.

3) Simply Measured: is a powerful reporting tool that provides a wide range of analytic reports for Facebook, Twitter and other social networks. It is a paid tool come offering a sign up for a free 14-day trial. It is offer a competitive analysis report, which enables to compare a Facebook page against up to 9 other pages to assess how well they are doing.
4) Klout: is a Twitter analytic tool. It gives each Twitter account a score between 1 - 100, according to its online social interaction. Klout score measures the size of user's networks and correlation the content to measure the interact with the content.

A. Social media platform profile design elements

Each social media platform has a profile or page design feature. This may include, the profile picture, background image etc. as mentioned in section 2.3.4. The museum social media profile should follow the best practice of this page design feature. In this particular section, this research analysed the eleven most important Social media (Facebook and Twitter) page design elements (Creger 2014; Kiss Metrics 2010):

1. Name
2. Username (that is included in the URL)
3. The Museum Bio (briefly what the museum is about)
    - Background in Twitter
4. The Museum website links in the main page
5. Showcase the company's branding, products and community
6. Use the correct image sizes
    a. Facebook: 852 x 315 cover photo; 180 x 180 profile picture
    b. Twitter: 1252 x 626 cover photo, 73 x 73 profile picture, 1600 × 1200 background image
7. Make designs visually consistent
8. Devote more space to images than to text

9. Pay attention to how the placement of the profile picture interacts with the cover/banner header
10. Make sure that designs abide by each platform's rules
11. If the design is for a promotion or social media campaign, keep it simple

The above elements were analysed for each individual case study except The National Museum on KSA, because of the lack of social media presence.

B: **In depth social media activities observation**

In depth observation of social media activities including; posts, timing, content type and engagements using Facebook/Twitter analysis sheet (see appendix H). Each case study museums social media platform was reviewed daily during the study period previously mentioned, to monitor for any posts or engagement. This was performed to enable any observe activities and identify good practice.

4.2.3 Related definitions

The tools that have been used in this case study use some expressions, terms and codes. Here are some definitions of each subsection used in this observational case study:

- Fan: is a user who "likes" a particular page. If a user chooses to "like" a page, they are then able to get updates from that page's administrator through status updates, link posts, and event invitations. Fans display lists of pages they have "liked" on their profile, under the "interests" section of their information tab. In April 2010, Facebook changed the terminology from "becoming a fan" of a page to "liking" a page (WhatIs.com, 2013).
- Fans: Total number of fans of the page.
- Fan Love: How popular the page is with Facebook users (i.e., fan count and active fan ratio). While the fan count is taken into account, it doesn't get as high a weighting as the other areas when determining the overall score.

- Growth: Growth of fans over the previous month or a particular period of time.
- Talking About: Fans on Facebook who are interacting with Page updates.
- Ad Value: The cost to reach these fans in a month if the Facebook page were using paid advertising. (This is calculated based on the industry average cost (CPM) for online advertising.)
- Response to Fans: How many posts the Page responds to. This includes responses to comments that someone made on a post or it can be a response to a fan's post. Participating in conversations is seen as adding value to the Page.
- Response Rate: How many Page posts made by fans get a responded.
- Response Time: How quickly has been responded to fans.
- Post Interaction: The average number of comments, likes and shares compared to the number of fans of the Facebook Page.
- Karma Level: A weighted engagement factor where shares are valued more than likes. (This is not related to number of fans.)
- Page Performance: This is calculated using a combination of the growth of fans and engagement and is scored out of 100.
- Page Information: It checks that Facebook page have filled out information on the Page with sufficient details such as the website name and some milestones.
- Posts per Day: Average number of posts per day.
- Posts by Page: It goes through an analysis of the posts on the Page.
- Posts per Day: the number of posts regularly every day on Facebook.
- Posts per Type: It's the variety of post types on the Page.
- Engagement on Admin Posts: Details on how much engagement posts were getting from fans. Are fans liking, commenting or sharing your posts?
- Virality: How viral the Page's content is, in terms of both the quantity of responses and the quality of the responses.

- Community Health Details: Details on how responsive each Page owner was to fan comments. Ideally to be very responsive to fan comments as this encourages more comments.
- Average Length of Posts: Shorter or tall posts.
- Curiosity: type of posts.
- Posts by Others: This assesses how responses from fans are dealt with.
- Posts by fans: Are fans posting enough on the timeline? You want fans to put up their own posts.
- Response time: is how quickly fans are responding to interact the Page.
- Broadcasting: How frequently the Page initiates conversations; for example, posting updates, pictures, videos or simply asking a question.
- Competitive Leaderboard: A side-by-side comparison of the key statistics for all the Pages.

4.3 Case study One: The National Museum (Saudi Arabia)

Figure 4-1 The National Museum of Riyadh

N (Source: scts.gov.sa)

The National Museum of KSA (Figure 4-1) is one of the most known museums in Saudi Arabia. It is located in the heart of King Abdul-Aziz Historical Centre in Riyadh, the capital of Saudi Arabia. This museum aims to present the history of the Kingdom of Saudi Arabia and its fundamentals and roles. Entry into the museum is not free; it costs a

nominal amount of SAR 15 (about £2.50). The museum two-storey building covers 28,000 square meters and occupies 17,000 square meters from eastern part of King Abdul-Aziz Historical Centre (see Figure 4-2).

The national museum of Riyadh does not have any social media accounts. For this reasons the observational case study for it just included the website analysis.

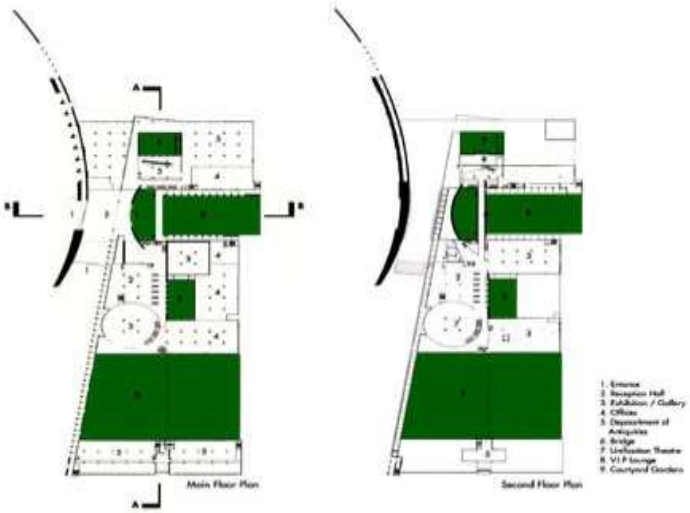


Figure 4-2 The National Museum of Riyadh architectural scheme
(Source: archnet.org)

4.3.1 The website

As mentioned in section 4.2, The National Museum's website was analysed by evaluating it using the Museum's web-design features checklist, analysing the website design layout and observing the changes and updating frequency. To start with, Table 4-8 presents an overview general information by illustrating the website relative information.

Table 4-8 The National Museum website overview

Domain Name	nationalmuseum.org.sa	Date checked
File size	998,907 bytes	On 06/04/2016
Registrant	General Authority for Tourism and Antiquities in Saudi Arabia	
Name Servers	ns1.easydns.com ns2.easydns.com	
Created on	29/10/2011	
Global Rank	2,824,439(down)	On 06/04/2016
Country rank	30,479 (down)	On 06/04/2016
Daily Page views per Visitor	1.60	On 06/04/2016
Versus in the last 3 months	30% Up	On 06/04/2016
Daily Time on Site	1:17	On 06/04/2016

From the table above, The National KSA Museum's website was created in late October 2011 and within nearly four years and a half it has reached to be ranked in 2,687,051 globally. These important figures can be used in the discussion to compare them with museums in UK

A: Museum's web-design features checklist

As mentioned in section 2.5.2.1, it is beneficial to use a website checklist to support the success of the website. A website checklist could be used for a new website or for improving an existing website (Kats, 2012).

Applying the Museum's web-design features checklist (see appendix I) to The National Museum's website found that it fulfilled 72 out of 174 elements within the checklist. The National Museum's website did not match the most important elements like:

- Branding not considered
- Not attractive or trendy design
- Not mobile-friendly (see Figure 4-3)
- Very low page speed insights (2/100) (Google page speed test)

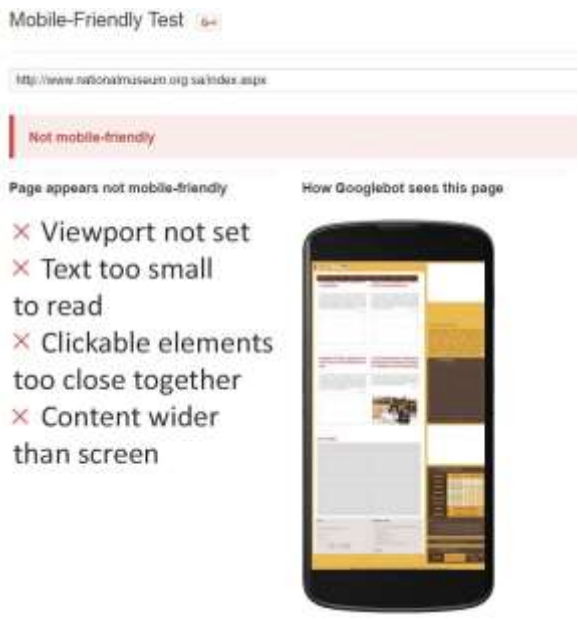


Figure 4-3 Mobile-friendly report
(Source: Google Mobile-Friendlt Test)

An important and a major limitation of this website is that it is not a mobile friendly website as shown in Figure 4-3 according to Google Mobile-friendly test. As

mentioned in section 2.5.2.7, being a mobile friendly website in very important as a lot of internet traffic is via smart mobile devices. Another point is that there is no branding consistency through the website.

B: Main page design layout and elements

Figure 4-4 shows a picture of The National Museum website taken in 26th March 2015 and the layout of it. The website main page contain many elements as listed below:

- Name and logo
- Choice of languages (Arabic and English)
- Link of home page
- Main bar including (Introduction about the museum, Hales, Activates, Publishing and Forum)
- Icons of the museum main sections
- Mix of news and paste events
- List of latest news
- Museum guide
- Visiting times
- Ticker price
- Poll and useful links
- Footer including (Introduction, Visitor guide, Hales, Sitemap and Postal Address)

Figure 4-5 shows a picture of The National Museum current website (taken in 5th April 2016). By analytically viewing the two pictures in Figure 4-4 and Figure 4-5, minor changes are noticed. Icons on the museum sections have been removed, a list of latest news exchanged with Latest images and an icon of contact us have added to the top of the page.

As mentioned in section 2.5.2.1, when designing a website, it is vital to consider the important elements that create an environment that is close to the feel of a physical visit to the museum (Olney et al., 1991; Eroglu et al., 2003). The website should create

an impact that increases visitors' enjoyment and curiosity and improves the perceived quality of the online experience.

Many elements, as researchers have explained in section 2.5.2.1, may affect the website design and consequently its quality. These elements include the domain name, design colour, font, images and layout (Jones, 2010; The Internet Marketing Academy, 2011). These factors will have an effect on the customers' experience and their level of enjoyment (Oh et al., 2008). Poor design is highly likely to have a dramatic effect on the web presence of the museum and its visitors (Nielsen, 1998).

Most of the website elements have included in the museum's website, at least the essential ones. The museum's website contains most of the essential elements for the web design, however there is a room for improvement.

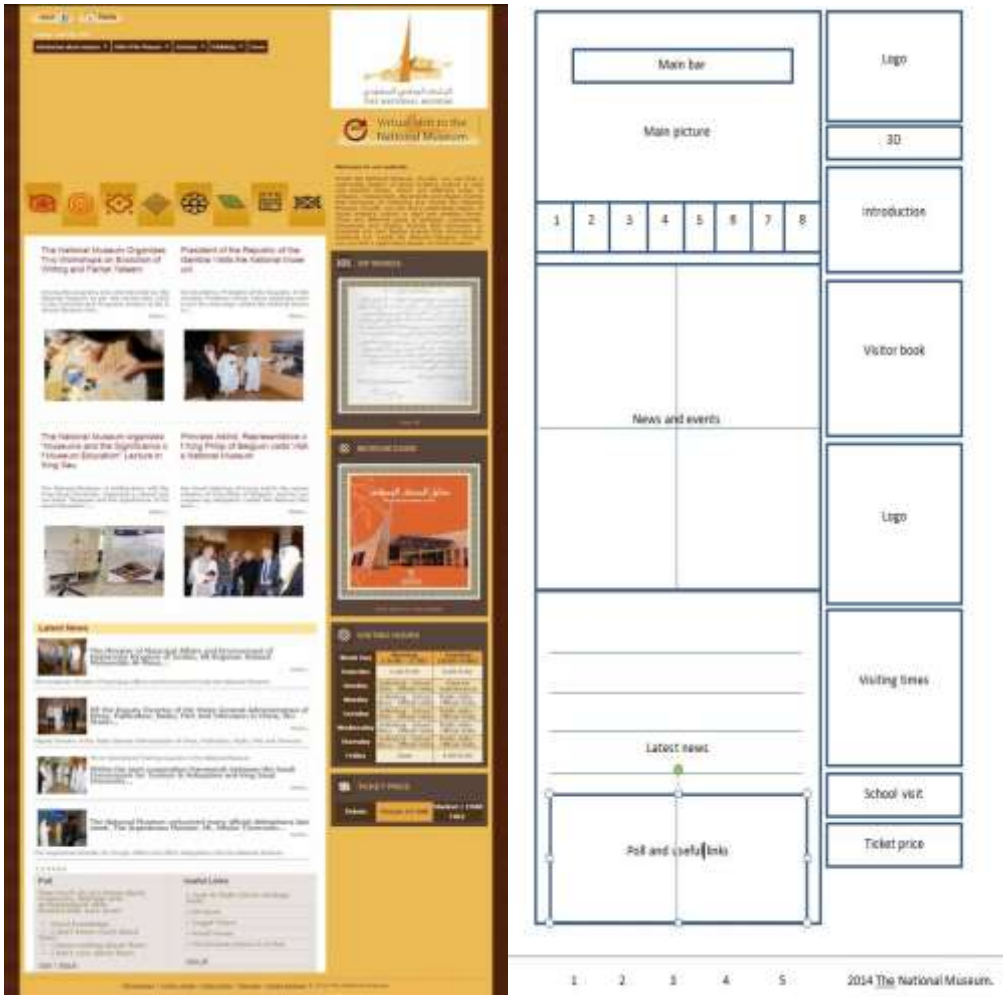


Figure 4-4 Analysing The National Mseum website layout
(Source of the picture: The National Museum website)

Figure 4-5 The National Museum current website

(Source: The National Museum website)

In the researcher's opinion, a major limitation of this website is that it is not a mobile friendly website as shown in Figure 4-3. As mentioned in section 2.5.2.7, being a mobile friendly website in very important as a lot of internet traffic is via smart mobile devices. Another point is that there is no branding consistency through the website.

C: Updating/changing frequency

In addition, the researcher tracked the changes on the website main page over eleven months from 21/04/2015 to 21/03/2016. The National Museum made a total of 16 changes during this period. Table 4-9 shows the changes dates and types. Calculating this means the average of updating the website is 1.45 changes per month.

Shepard (2011) and Wowe (2013) mentioned that the website should be updated with each event and at least once a month. However, with the case of the National museum of KSA, it seems that this updating frequency is poor and not following the museum's activities and news.

Table 4-9 Changes and dates of The National Museum

Date	Change	Changes Old --------→ New
18/5/2015	Activity notification	
22/5/2015	Activity notification	
25/5/2015	News	
29/5/2015	News	
1/6/2015	News	
29/06/2015	News	
30/06/2015	News	
4/8/2015	News	
10/9/2015	News	
14/9/2015	News	
15/9/2015	News	
16/9/2015	News	
5/2/2016	News	
10/2/2016	News	
11/2/2016	News	
14/3/2016	Activity notification	

4.4 Case study Two: Dar Al-Madinah Museum (Saudi Arabia)

Figure 4-6 Dar Al-Madinah Museum
(Source: Dar Al-Madinah Museum)

Dar Al-Madinah Museum (Figure 4-6) is, also, one of the most known museums in Saudi Arabia. It is located in the heart of the Knowledge Economic City (KAEC) in Al-Madinah city, the second holy city of Islam. This museum aims to present the history of AL-Madinah City and the prophet (Peace Be Upon Him) and its fundamentals and roles. Entry into the museum is not free; it costs a nominal amount of SAR 15 (about £2.5). The museum one-storey building covers 3,000 square meters and occupies square meters 1,050 square meters from middle part of the Knowledge Economic City (KAEC) (see Figure 4-7 and Figure 4-8).

Moreover, Dar Al-Madinah Museum accepted to fully cooperative with this research and the researcher helped them to develop their website during this study (further details in chapter 8). Consequently, more analytical data is available in this case study (More details in chapter 8).

Figure 4-7 Dar Al-Madinah Museum site general scheme
(Source: madinahkec.com)

Figure 4-8 Dar Al-Madinah Museum architectural scheme
(Source: madinahkec.com)

4.4.1 The website

As mentioned in section 4.2, Dar Al-Madinah Museum's website has been analysed by evaluating it through the Museum's web-design features checklist, analysing the website design layout and observing the changes and updating frequency. The museum has recently developed their website in order to test this research framework. In this section the old website will be discussed. To start with, Table 4-10 presents an overview picture by illustrating the website relative information.

Table 4-10 Dar Al-Madinah Museum website information

Domain Name	dar-almadinah.com	Date checked
File size	47,316 Bytes	On 06/04/2016
Registrant	ENOM, INC	
Name Servers	ns12.wixdns.net ns13.wixdns.net	
Created on	03/09/2013	
Global Rank	11,904,642 (up)	On 06/04/2016
Country rank	104,839 (down)	On 06/04/2016

From the table above, Dar Al-Madinah Museum's website was created in late early 2013 and within nearly two years and a half it has reached to be ranked in 11,904,642 globally. These important figures can be used to compare them with museums in UK (see section 4.7).

A: Museum's web-design features checklist

As mentioned in section 2.5.2.1, it is beneficial to use a website checklist to support the success of the website. A website checklist could be used for a new website or for improving an existing website (Kats, 2012).

Applying the Museum's web-design features checklist into Dar Al-Madinah Museum's website found that it fulfilled 93 out of 174 elements within the checklist. Dar Al-Madinah Museum's website did not match the most important elements like:

- Branding not considered
- Not mobile-friendly (see Figure 4-9)
- Low page speed insights (28/100) (Google page speed test)

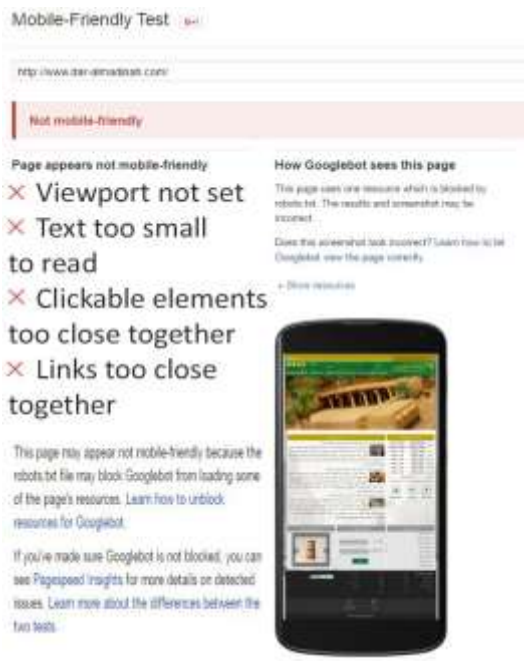


Figure 4-9 Mobile-friendly report
(Source: Google Mobile-Friendlt Test)

As noted in case study one, a major limitation of this museum's website is that it is not a mobile friendly website as shown in Figure 4-3. As mentioned in section 2.5.2.7, being a mobile friendly website is essential due to a large number of internet traffic coming via smart mobile devices. Another point is that there is no branding consistency through the website.

B: Main page design layout and elements

Figure 4-10 shows a picture of Dar Al-Madinah Museum's old website taken in March 2015 and the main elements of it. The website main page content many elements as listed below:

- Name and logo
- Social media icons
- Link of home page
- Main bar including (Main, Information, Halls, Publications, News and Events, Models and contact us)
- Search box
- News
- Opining times
- Shop icon
- Email icon
- How to reach us icon
- Join us
- Gallery rolling pictures
- Footer including (Blog, trip advisor window and partnership logos)

It is vital that important elements are designed in a way that creates an web presence that is as close to the feel of actually visiting the museum, as mentioned in section 2.5.2.1, (Olney et al., 1991; Eroglu et al., 2003). The website should create an impact that increases visitors' enjoyment and curiosity and improves the perceived quality of the online experience.

Many elements, as researchers have explained in section 2.5.2.1, may affect the website design and consequently its quality. These elements include the domain name, design colour, font, images and layout (Jones, 2010; The Internet Marketing Academy, 2011). These factors will have an effect on the customers' experience and their level of enjoyment (Oh et al., 2008). Poor design is highly likely to have a dramatic effect on the web presence of the museum and its visitors (Nielsen, 1998).

It is clear from the points above that, Dar Al-Madinah museum's website contained most of the important elements in their website. This could be better if the website is also mobile friendly too.

As mentioned above, Dar Al-Madinah Museum accepted to fully cooperate with this research and the researcher helped them to develop their website as it discussed in chapter 8, as a part of the framework evaluation. Consequently, the new website will not be analysed in this section. In addition to that, Dar Al-Madinah Museum allowed the researcher to access the control panel of their website. Therefore, more details, such as the website statistics data, are available in analysing this website (More details in chapter 8).

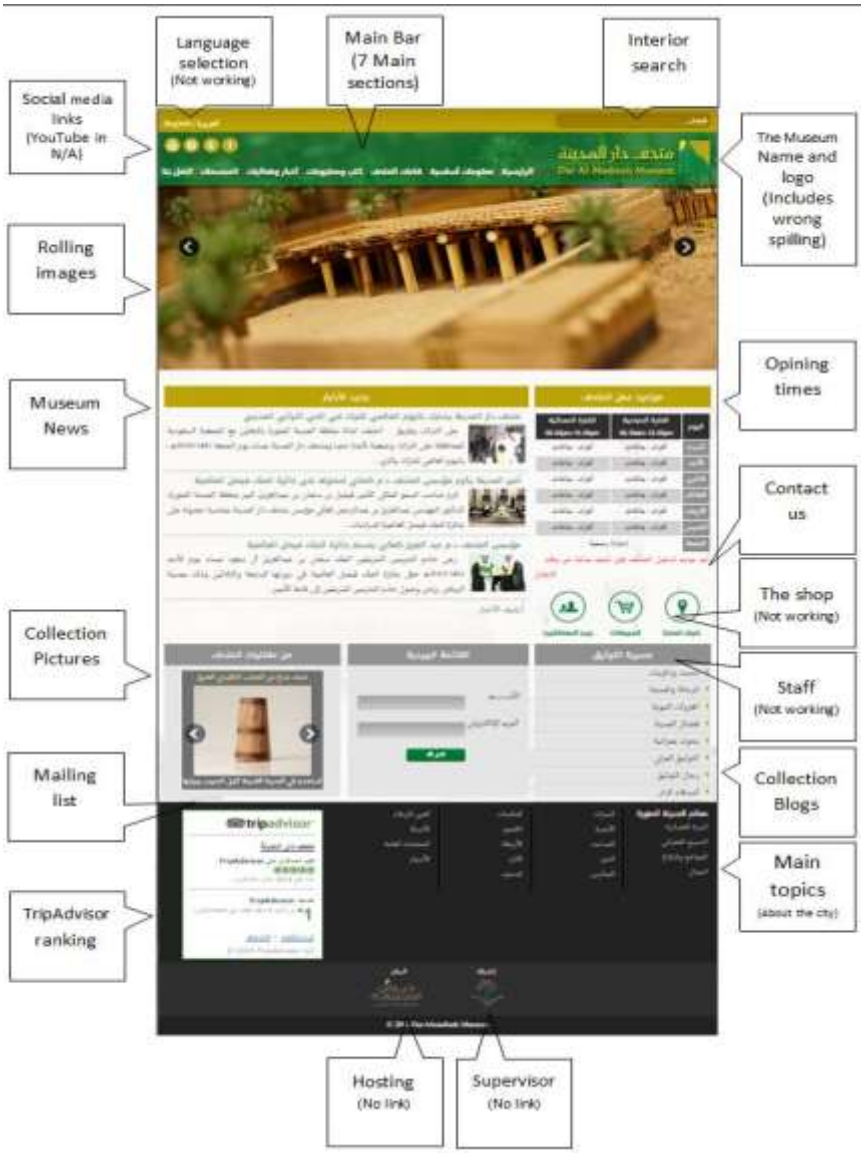


Figure 4-10 Analysing Dar Al-Madinah Museum old website
(Source of the picture: The Museum website)

According to Google analytics of the museum webpage, during the period (14/11/2014-23/12/2014) there were just 13 visits to the Museum's website as shown in Figure 4-11. One out of 13 was a new visitor. Each visitor viewed 1-2 pages with the average length of time 3 seconds per visit. This number of visitors, from the researcher opinion, is very poor. Also, the average length of time the visitors spend on the website, which is 3 seconds.

Figure 4-11 Dar Al-Madinah website visitors

C: Updating/changing frequency

In addition, the researcher tracked the changes on the website main page over eleven months from 21/04/2015 to 21/03/2016. Dar Al-Madinah Museum made a total of 21 changes during this period. Table 4-11 shows the changes dates and types. Calculating this means the average of updating the website are 1.9 changes per month.

As Shepard (2011) and Wowe (2013) mentioned that the website should be updated with each event and at least once a month. However, with the case of Dar Al-Madinah Museum, it seems that this updating frequency is still poor and does not following the museum's activities and news.

Table 4-11 Changes and dates of Dar Al-Madinah Museum website

Date	Change	Changes Old ——→ New
28/4/2015	News	
18/5/2015	News	
24/5/2015	News	
25/5/2015	News	
27/5/2015	News	
30/5/2015	Main picture	
1/06/2015	News	
2/6/2015	News	
3/6/2015	News	
22/6/2015	Main picture, news and opining times	
8/7/2015	News	
9/7/2015	News	
29/7/2015	News	
4/8/2015	Main picture	
23/8/2015	News	
5/9/2015	The website closed	
15/9/2015	Re open	
17/9/2015	News	
18/9/2015	Opining times	
13/1/2016	Main picture	
11/3/2016	News	

4.4.2 Facebook

As mentioned in section 4.2.2, the Dar Al-Madinah Museum Facebook page has been studied through analysing the platform profile design elements, in-depth observation of activities in the Facebook page and analysing the current situation. To start with, Table 4-12 presents an overview picture by illustrating the Facebook page relative information.

Table 4-12 An overview on Dar Al-Madinah Museum Facebook page

Feature	Details
URL	https://www.facebook.com/dar.almadinah.musuem
Page name	متحف دار المدينة المنورة للتراث العمراني
Category	Museum/Art Gallery
Username	Dar.almadinah.musuem
Firs post	2/10/2011

Analysing the situation of current Facebook page using online tools shows information presented in Table 4-13

Table 4-13 Facebook page situating analysis (Correct as at 6/4/2016)

Feature	Details
Total likes	5,048
Like growth	3.21%
PTAT	130
Engagement rate	2.58% LikeAlyzer - 0.039% Karma
Other page liked	0
Likes, Comments & Share per post	74
Post per type	Pic 75%, video 6.3%, Links 54.2% and quotes 6.3%
Every one posting ability	No
Post by fans	---
Response rate	---
Hashtag usage	Yes
Profile performance	7%
Average weekly growth	0.51%
Most comments times	12-15 pm (GMT)
Most comments days	Monday – Tuesday
LikeAlyzer rate	37
Average in same Category	58

The two tables above mentioned some important details about the museum Facebook page. It showed the page name, first post date, number of likes, like growth.. etc. These figures are useful in giving a general overview of the page and will help in comparing and discussion in section 4.7. It shows that the during 4 years and 6 months, the museum has reached to 5,048 likes (about 1121 likes per year) and rated 37 from LikeAlyzer rate.

A: Facebook page profile design elements

Applying the eleven Social media elements on Dar Al-Madinah Facebook page (Figure 4-12) found that, it fulfilled seven out of eleven of the elements as shown in Table 4-14.

Figure 4-12 A picture of Dar Al-Madinah Museum Facebook page

(Source: The Museum Facebook page)

Table 4-14 Applying the eleven elements on Dar Al-Madinah Facebook page (Correct as at 6/4/2016)

Elements	Analysis
Name	Yes
Username	Yes
The museum Bio/Background	No
The website link	No
Showcase the Museum's branding	No
Use the correct image sizes	No
Make designs visually consistent	Yes
Devote more space to images than to text	Yes
The placement of the profile picture	Yes
Considering platform's rules	Yes
Simplicity	Yes

The Museum Bio and background information and the link to the Museum website page does not appear in the main pane nor in the "About" page. Also, the museum branding and the image size have not been considered very well. The Museum name and logo presented in a very bad resolution. Many font types have used in the main picture which led to the fact they do not follow the museum branding.

B: In-depth Facebook activities observation

In depth observation of Facebook activities including; posts frequency, post timing, Post content type and engagements. The researcher observed the Facebook page for just under two months from 27th October 2014 till 23ed December 2014. The

Museum has posted 9 posts during this period (see Table 4-15) with the average of 0.15 posts per day (about a post per week). However, the postage was not in a suitably high frequency (see Figure 4-13). They have posted one post every few days as shown in the postage frequency in Figure 4-14.

Table 4-15 Dar Al-Madinah Museum Facebook general statistics
(Correct as at 6/4/2016)

Subject	Statistics
Total post	9
Likes at the beginning	2948
Likes at the end	3037
Total new likes	89
Total engagementd	111

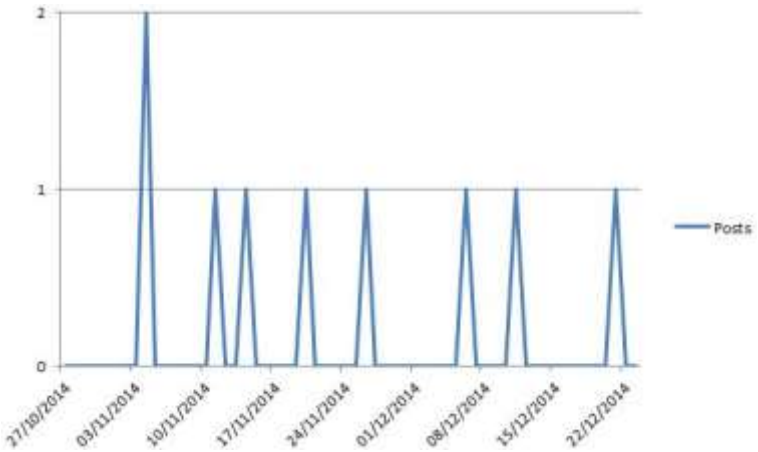


Figure 4-13 Dar Al-Madinah Museum postage frequency

Figure 4-13 presents the Facebook page like growth. The observation started with 2,948 likes on the first day, growing up to 3,037 likes on the last day. This made 89 increases in likes within 57 days. Calculating these figures presented that, they had 1.56 likes per day and each post added one 9.88 likes.

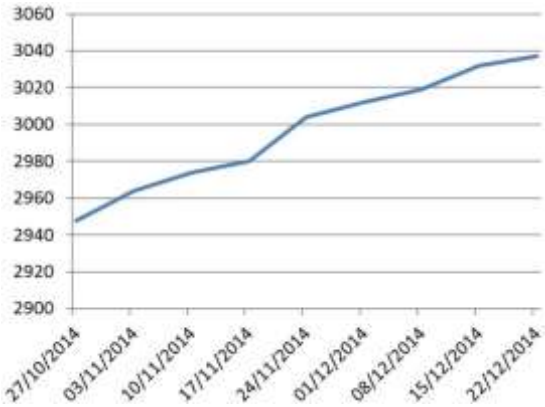


Figure 4-14 Dar Al-Madinah Museum Facebook page like growth

4.4.3 Twitter

As mentioned in section 4.4, Dar Al-Madinah Museum Twitter account has been studied through analysing the platform profile design elements, in-depth observation of activities in the Twitter account and analysing the current situation. To start with, Table 4-16 presents an overview picture by illustrating the Twitter account's relative information.

Table 4-16 An overview on Dar Al-Madinah Museum Twitter account

Elements	Details
URL	https://twitter.com/Daralmadinahmus
Account name	@Daralmadinahmus
Username	متحف دار المدينة
Joint	8th November 2013
Verified	No

The result of analysing the current Twitter account situation using online tools are shown in Table 4-17.

Table 4-17 Twitter account situating analysis (Correct as at 6/4/2016)

Feature	Details
Total tweets	4,675
Following	23
Followers	7,563
Likes	646
Listed	36
Ration of followers per person followed	329
User mention	923
Average mention per tweet	0.29
Links	552
Average Links per tweet	0.17
Retweets	1,517
Percentage of retweets	48%
Replies	557
Percentage of replies	18%
Hashtags	1,901
Average hashtags per tweet	0.60
Tweets retweeted	1,230
Tweets favorited	1,085

From the tables above, Dar Al-Madinah Museum has reached to 4,675 within about 2 years and 5 months (29 months), from 8th April 2016. This calculated to about

161.2 raised followers per month. In addition, each tweet added just about 1.07 followers to the profile. These figures and other figures from the tables above will analysed in discussion in chapter discussion 4.7.

A: Twitter page profile design elements

Applying the eleven Social media elements on Dar Al-Madinah Twitter account (Figure 4-15) found that, it fulfilled eight out of eleven of the elements as shown in Table 4-18.

Figure 4-15 A picture of Dar Al-Madinah Museum Twitter account

(Source: The Museum Teitter account)

Table 4-18 Applying the eleven elements on Dar Al-Madinah Twitter account (Correct as at 6/4/2016)

Elements	Analysis
Name	Yes
Username	Yes
The museum Bio	Information specified
The website link	Yes
Showcase the Museum's branding	Yes
Use the correct image sizes	No
Make designs visually consistent	No
Devote more space to images than to text	Yes
The placement of the profile picture	No
Considering platform's rules	Yes
Simplicity	Yes

Table 4-18 above presents the elements that Dar Al-Madinah Museum considered in their in their Twitter account profile. It is important for the Dar Al-

Madinah Museum to take care of these elements as Great River Creative (2014), the online marketing solution company, mentioned that, online marketing will drive people to visit and re-visit museums' online profiles and websites, and then this can be converted into through the door visitors (2014). (Further details in section 2.5.2.4)

B: In-depth Twitter activities observation

In depth observation of Twitter activities included; posts frequency, post timing, Post content type and engagements. The researcher observed the Twitter account for just under two months from 27th October 2014 till 23ed December 2014 (See Table 4-19 for all observation general data). The Museum tweeted 42 tweets during this period, and a total of 79 responses between liking other tweets, retweeting other tweets and replaying to other tweets. The average of their own tweets was 0.74 tweets per day. However, the tweeting frequency was not in suitable frequency as Figure 4-16 shows the day tweeting frequency.

Table 4-19 Dar Al-Madinah MuseumTwitter general statistics

Subject	Statistics
Total Tweets	42
Total liked	2
Total Retweeted	45
Total replaied	26
Total respones	79
Total engagementd	1737

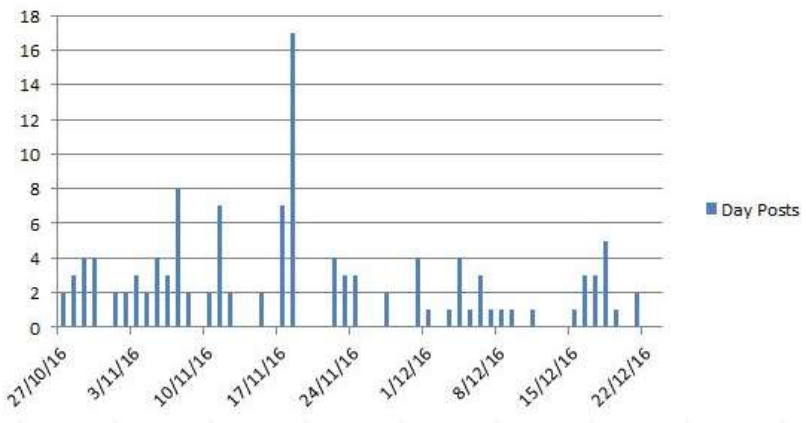


Figure 4-16 Dar Al-Madinah Museum Twitter posts per day

Figure 4-17 presents the Twitter followers growth. The observation started with 1,741 followers on the first day, growing up to 2,088 followers in the last day. This made

347 increases in followers within 57 days. Calculating these figures presented that the museum average tweet is 0.73 tweets per day and each tweet add 8.26 new followers.

Figure 4-17 Dar Al-Madinah Museum Twitter followers growth

The outcomes of these figures above will help in comparison and chapter analysis in section 4.7.

4.5 Case study Three: Birmingham Museum & Art Gallery (United Kingdom)

Figure 4-18 Birmingham Museum and Art Gallery

(Source: localcitylife.co.uk)

Birmingham Museums are managed by Birmingham Museums Trust which is a registered charity. It is responsible for governing and managing the museum sites and collections owned by Birmingham City Council.

Birmingham Museum and Art Gallery (BMAG) is one of Birmingham Museums trust's eight venues. It has wonderful sites that present attractive look into Birmingham's wealthy and live past and showcase world-class museum collections.

Birmingham Museum and Art Gallery first opened in 1885. It is located in a Grade II listed city centre landmark building (see Figure 4-21). There are over 40 galleries to explore that display art, applied art, social history, archaeology and ethnography.

4.5.1 The website

As mentioned in section 4.2, Birmingham Museum & Art Gallery's website has analysed by evaluating it through the Museum's web-design features checklist, analysing the website design layout and observing the changes and updating frequency. The museum has recently developed their website. To consider the development in design, this section has targeted the old and new website. The old website picture was captured on 18th March 2014, and the new website picture was captured on 25th February 2015. To start with, Table 4-20 presents an overview picture by illustrating the website relative information checked on 8th April 2016.

Table 4-20 Birmingham Museum & Art Gallery website information

Domain Name	www.birminghammuseums.org.uk	Date checked
File size	34,640 bytes	On 06/04/2016
Registrant	SCC IT Support	
Name Servers	ns.123-reg.co.uk ns2.123-reg.co.uk	
Created on	09/03/2012	
Global Rank	653,792 (down)	On 06/04/2016
Country rank	26,348 (down)	On 06/04/2016
Daily Page views per Visitor	3.60	On 06/04/2016
Versus in the last 3 months	20% (up)	On 06/04/2016
Daily Time on Site	3.15	On 06/04/2016
Paid Search	0%	On 06/04/2016

From the table above, Birmingham Museum's website was created in early March 2012 and within nearly four years it has reached to be ranked in 563,792 globally. These important figures can be used in the discussion to compare them with museums

in KSA. Factors may then be identified to help KSA museums to have similar popularity on the web.

A: Museum's web-design features checklist

Applying the Museum's web-design features checklist into Birmingham Museum & Art Gallery's old website found that it fulfilled 127 out of 174 elements within the checklist. Birmingham Museum & Art Gallery's website did not match the most important elements like:

- Domain name in not meaningful
- Not attractive or trendy design
- Not mobile-friendly
- Low page speed insights (55/100) (Google page speed test)

Applying the Museum's web-design features checklist into Birmingham Museum & Art Gallery's new website found that it fulfilled 160 out of 174 elements within the checklist. Birmingham Museum & Art Gallery's website did not match only minor elements like:

- Visit us page not linked with contact us page
- Do not have their shop on the website
- Low page speed insights (53/100) (Google page speed test)

Figure 4-19 shows Google mobile friendly reports for the old and the new Birmingham Museum & Art Gallery's website.

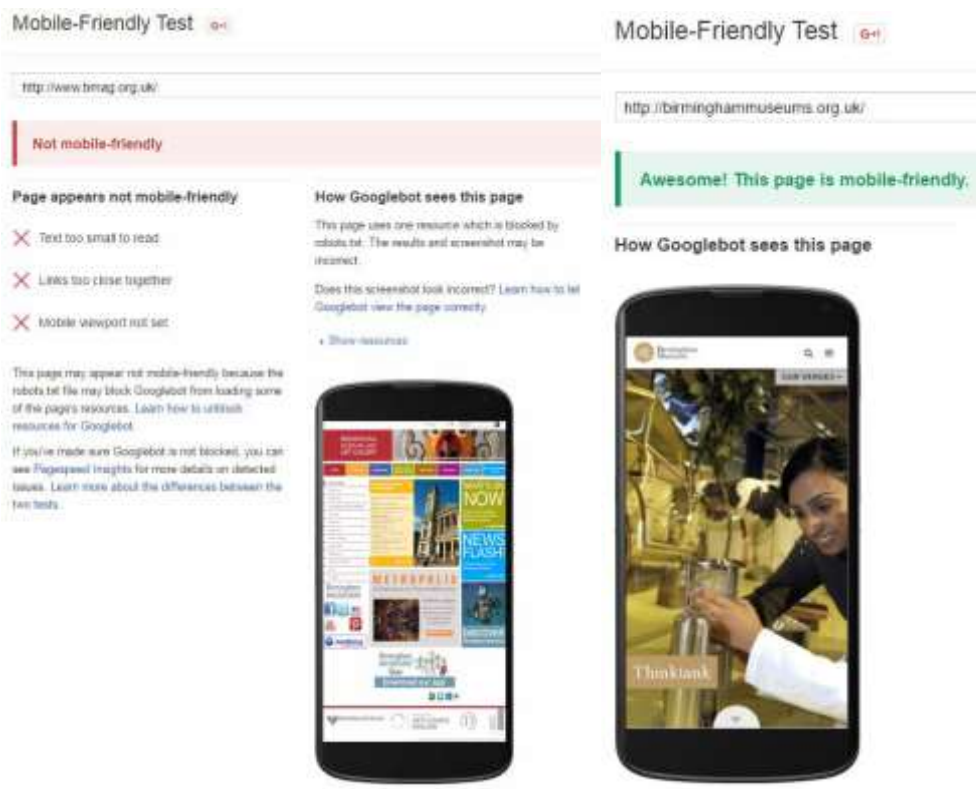


Figure 4-19 Old and new website mobile-friendly report
(Source: Google Mobile-Friendlt Test) (Correct as at 6/4/2016)

In the researcher's opinion, a major limitation of the old website is that it is not a mobile friendly website as shown in Figure 4-19. As mentioned in section 2.5.2.7, being a mobile friendly website in very important as a lot of internet traffic is via smart mobile devices.

B: Main page design layout and elements

Figure 4-20 shows a picture of Birmingham Museum & Art Gallery's old website taken in March 2014 and the main elements of it. The old website main page content many elements as listed below:

- The Museum name
- Museum slogan
- Main bar including all museums halls
- Side menu
- Font accessibility
- Search box
- What's on

- News
- Social media icons
- Donate icon
- Find us
- Partnership and sponsors
- Footer including (News, Events, Contacts, support us, Visit us, Learning & schools and Help)

Many elements, as researchers have explained in section 2.5.2.1, may affect the website design and consequently its quality. These elements include the domain name, design colour, font, images and layout (Jones, 2010; The Internet Marketing Academy, 2011). These factors will have an effect on the customers' experience and their level of enjoyment (Oh et al., 2008). Poor design is highly likely to have a dramatic effect on the web presence of the museum and its visitors (Nielsen, 1998).

The website missed some important element like the museum shop. Otherwise, many of the website elements are included in the museum's website. The design layout in the original museum's website, in the researcher's opinion, could be improved upon by making few changes such as making the pages more interactive. It is noted that the new version of the website is improved in terms of being simplified and more interactive with users. The impact of redesigning the website has improved the museum's online engagement and the number of visitors which will be mentioned in more details in chapter six.

Figure 4-20 Analysing Birmingham Museum & Art Gallery's old website
(Source of the picture: The Museum website)

Figure 4-21 shows a picture of Birmingham Museum & Art Gallery's new website taken in February 2015. The new website main page content many elements as listed below:

- The Museum name and logo
- Museum slogan
- Main bar including (What's on, About, Collection, Eat & Drink, School, Blog, Support us, Volunteering, Venue hire and Contact)
- A drip down menu including all museum Halls and branches
- Search box
- Pictures g most attractive attractions like: What's on, Coming events, Gallery and Become a member.
- Sign up

- Social media icons
- Donation
- Footer infolding (Partnership and sponsors, privacy policy, Sitemep and website accessibility)

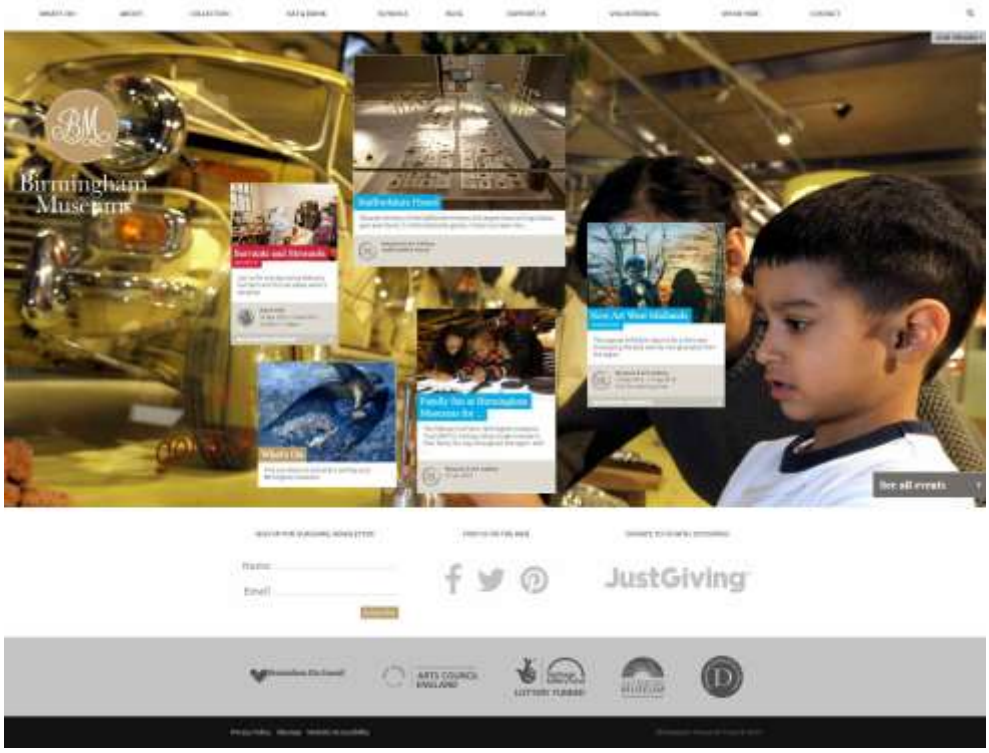


Figure 4-21 Birmingham Museum & Art Gallery's new website
(Source: birminghammuseums.org.uk)

C: Updating/changing frequency

In addition, the researcher tracked the changes on the website main page over eleven months from 21/04/2015 to 21/03/2016. Birmingham Museum & Art Gallery made a total of 11 changes during this period. Table 4-21 shows the changes dates and types. Calculating this means the average of updating the website is 1 change per month.

As Shepard (2011) and Wowe (2013) mentioned that the website should be updated with each event and at least once a month. However, with the case of Birmingham museum, it seems that this updating frequency is very poor and not following the museum's activities and news. The museum improved updating frequency when they redesigned the website and this and this has gave the museum more online

engagement and raised the number of the door visitor as will discussed in more details chapter six.

Table 4-21 Changes and dates of Birmingham Museum website

Date	Changes Old --------→ New
21/4/2015	
23/4/2015	
26/4/2015	
27/4/2015	
18/5/2015	
2/06/2015	
3/06/2015	
9/7/2015	
30/7/2015	
7/9/2015	
2/12/2015	

4.5.2 Facebook

As mentioned in section 4.4, Dar Al-Madinah Museum's Facebook page has been studied through analysing the platform profile design elements, in-depth observation of activities in the Facebook page and analysing the current situation. To start with, Table 4-22 presents an overview picture by illustrating the Facebook page's relevant information.

Table 4-22 An overview on Birmingham Museum and Art Gallery Facebook page

Feature	Details
URL	https://www.facebook.com/BirminghamMuseumandArtGallery
Page name	Birmingham Museum and Art Gallery (UK)
Category	Non-Profit Organization
Username	Birminghammuseumandartgallery
Firs post	13/09/2008

Analysing the current Facebook page situating using online tools shows information presented in Table 4-23.

Table 4-23 Facebook page situating analysis (Correct as at 6/4/2016)

Feature	Details
Total likes	18,856
Like growth	7%
PTAT	834
Engagement rate	4.42% LikeAlyzer - 0.34% Karma
Other page liked	10
Likes, Comments & Share per post	71
Post per type	Pic 45.8% and Links 54.2%
Every one posting ability	Yes
Post by fans	1-2 time a week
Response rate	15%
Response time	1155 minutes
Hashtag usage	No
Profile performance	27%
Average weekly growth	N/A
Most comments times	9-11 am and 12-14 pm (GMT)
Most comments days	Monday – Tuesday
LikeAlyzer rate	76

The two tables above mentioned show some important details about the museum Facebook page. It showed the page name, first post date, number of likes, like growth.. etc. These figures are useful in giving a general overview of the page and will help in comparing and discussion in section 4.7.

A: Facebook page profile design elements

Applying the eleven Social media elements on Birmingham Museum & Art Gallery Facebook page (Figure 4-22) found that, it fulfilled ten out of eleven of the elements as shown in Table 4-24.

Figure 4-22 A picture of Birmingham Museum & Art Gallery Facebook page

(Source: BMAG Facebook page)

Table 4-24 Applying the eleven elements on Birmingham Museum & Art Gallery Facebook page

Elements	Analysis
Name	Yes
Username	Yes
The museum Bio/Background	Information specified
The website link	Yes
Showcase the Museum's branding	Yes
Use the correct image sizes	Yes
Make designs visually consistent	Yes
Devote more space to images than to text	Yes
The placement of the profile picture	Yes
Considering platform's rules	Yes
Simplicity	Yes

B: In-depth Facebook activities observation

In depth observation of Facebook activities included; posts frequency, post timing, Post content type and engagements. The researcher observed the Facebook page for just under two months from 27th October 2014 till 23ed December 2014. The Museum has posted 9 posts during this period (see Table 4-25) with the average of 0.53 posts per day. However, the postage frequency was not high (see Figure 4-23). They have posted approximately one post in every two days as shown in the postage frequency in Figure 4-23.

Table 4-25 Birmingham Museum Facebook general statistics

Subject	Statistics
Total post	30
Likes at the beginning	14237
Likes at the end	14694
Total new likes	457
Total engagementd	1003

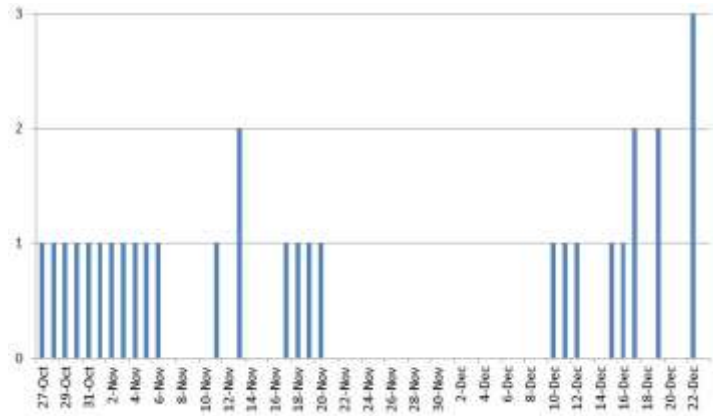


Figure 4-23 Birmingham Museum postage frequency

Figure 4-24 presents the Facebook page like growth. The observation started with 14,237 likes on the first day, growing up to 14,694 likes on the last day. This made 467 increases in likes within 57 days. Calculating these figures presented that thay had about 8 likes per day and each post added about 18.8 likes.

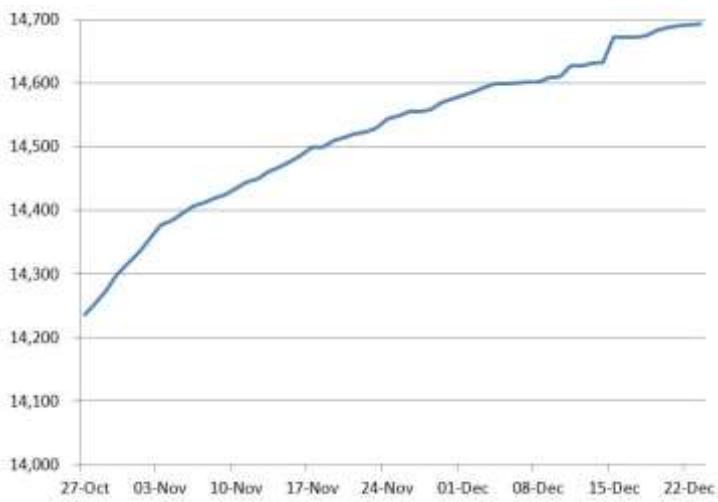


Figure 4-24 Birmingham Museum Facebook page like growth

4.5.3 Twitter

As mentioned in section 4.4, Birmingham Museum & Art Gallery Twitter account was studied through analysing the platform profile design elements, in-depth observation of activities in the Twitter account and analysing the current situation. To start with, Table 4-26 presents an overview picture by illustrating the Twitter account's relevant information.

Table 4-26 An overview on Birmingham Museum & Art Gallery Twitter account

Elements	Details
URL	https://twitter.com/bm_ag
Account name	@BM_AG
Username	Birmingham Museums
Joint	1st October 2009
Verified	Yes

Analysing the current Twitter account situation using online tools shows information presented in Table 4-27

Table 4-27 Birmingham Museum & Art Gallery Twitter account situating analysis
(Correct as at 6/4/2016)

Feature	Details
Total tweets	38.6k
Following	5,777
Followers	33.9k
Likes	12.1k
Lists	10
Listed	966
User mention	786
Links	246
Average Links per tweet	0.08
Retweets	2,255
Percentage of retweets	71%
Replies	359
Percentage of replies	11%
Hashtags	374
Average hashtags per tweet	0.12
Tweets retweeted	635
Tweets favorited	758

From the tables above, Birmingham Museum has reached 33.900 followers within about 6 years and 6 months (79 months), from 1st October 2009. This calculates

to over 429.1 new followers per month. In addition, each tweet added just about 0.87 followers to the profile. These figures and other figures from the tables above will analysed in discussion in chapter discussion 4.7. The general conclusion is that the changes have had a very positive impact on the museums social media presense.

A: Twitter page profile design elements

Applying the eleven Social media elements on Birmingham Museum & Art Gallery Twitter account (Figure 4-25) found that, it fulfilled nine out of eleven of the elements as shown in Table 4-28.

Figure 4-25 A picture of Birmingham Museum & Art Gallery Twitter account

(Source: BMAG Twitter account page)

Table 4-28 Applying the eleven elements on Birmingham Museum & Art Gallery Twitter account

Elements	Analysis
Name	Yes
Username	Yes
The museum Bio	Information specified
The website link	Yes
Showcase the Museum's branding	Yes
Use the correct image sizes	Yes
Make designs visually consistent	No
Devote more space to images than to text	Yes
The placement of the profile picture	No
Considering platform's rules	Yes
Simplicity	Yes

Table 4-28 above presents the elements that the Birmingham Museum considered in their Twitter account profile. It is important for Birmingham Museum to take care of these elements as Great River Creative (2014), the online marketing solution company, mentioned that, online marketing will drive people to visit and re-visit museums' online profiles and websites, and then this can be converted through the door visitors (2014). (Further details in section 2.5.2.4)

B: In-depth Twitter activities observation

In depth observation of Twitter activities included; posts frequency, post timing, Post content type and engagements. The researcher observed the Twitter account for just under two months from 27th October 2014 till 23ed December 2014 (See Table 4-29 for all observation general data). The Museum has tweeted 179 tweets during this period, and a total of 1187 responses between liking other tweets, retweeting other tweets and replaying to other tweets. The average of their own tweets was 3.14 tweets per day. However, the tweeting frequency was not in suitable frequency as Figure 4-26 shows the day tweeting frequency.

Table 4-29 Birmingham Museum Twitter general statistics

Subject	Statistics
Total Tweets	179
Total liked	356
Total Retweeted	677
Total replaied	154
Total respones	1187
Total engagementd	28744

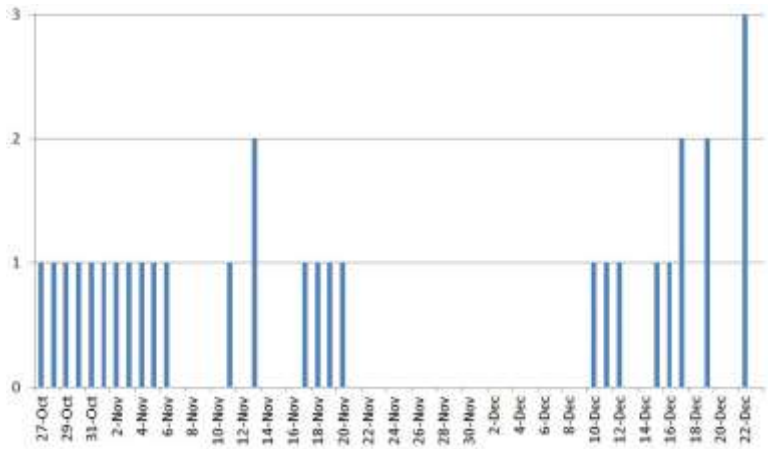


Figure 4-26 Birmingham Museum Twitter posts per day

Figure 4-27 presents the Twitter followers growth. The observation started with 23,2k followers on the first day, growing up to 24,2k followers in the last day. This made 1000 increases in followers within 57 days. Calculating these figures presented that the museum average tweet is 3.14 tweets per day and each tweet add just under 5.6 new followers.

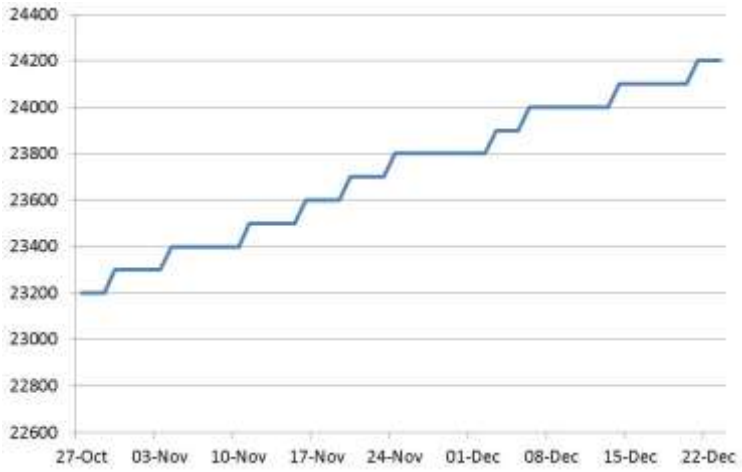


Figure 4-27 Birmingham Museum Twitter followers growth

The outcomes of these figures above will help in comparison and chapter analysis in section 4.7. The trend of the graph can be seen to show a significant upward improvement in the number of followers.

4.6 Case study Four: National Space Centre

The National Space Centre, Leicester, is an independent not-for-profit Education Charity (Figure 4-28). The charity is run by a board of Trustees and supports a Space Science Centre and Key Stage linked Education Programmes for schools. This museum has opened in June 2001 (Bishop n.d.). Entry into the museum is not free; it costs a nominal amount of £ 14 per adult and £11 per child.

Figure 4-28 The National Space Centre

(Source: jeremylim.co.uk)

4.6.1 The website

As mentioned in section 4.1, The National Space Centre's website have analysed by evaluating it through the Museum's web-design features checklist, analysing the website design layout and observing the changes and updating frequency. The museum has recently redesigned their website (April 2016). To consider the development in design, this section examined the old version and the new version of the website. The old website version picture was captured on 9th February 2014, and the new website version picture was captured on 25th February 2015. To start with, Table 4-30 presents an overview picture illustrating the website relevant information checked on 8th April 2016.

Table 4-30 The National Space Centre website information

Domain Name	http://spacecentre.co.uk/	Date checked
File size	N/A	06/04/2016
Registrant	INFOMETRIX	
Name Servers	ns1.tsohost.co.uk ns2.tsohost.co.uk ns3.tsohost.co.uk	
Created on	13/04/1999	
Global Rank	601,182 (up)	06/04/2016
Country rank	32,291 (down)	06/04/2016
Daily Page views per Visitor	3.00	06/04/2016
Versus in the last 3 months	20% (up)	06/04/2016
Daily Time on Site	3.18	06/04/2016
Paid Search	15.95%	

From the table above, The National Space Centre website was created in late April 1999 and within nearly 12 years and a half it has reached to be ranked in 601,182 globally. These important figures can be used in the discussion to compare them with museums in KSA.

A: Museum's web-design features checklist

Applying the Museum's web-design features checklist to The National Space Centre's old website found that it fulfilled 90 out of 174 elements within the checklist. The National Space Centre's website did not match the most important elements like:

- Not mobile-friendly
- Social media icon is very small
- Very low page speed insights (33/100) (Google page speed test)

Applying the Museum's web-design features checklist to The National Space Centre's new website found that it fulfilled 118 out of 174 elements within the checklist. The National Space Centre's website did not match only minor elements like:

- Social media icon is still small
- Does not have their shop on the website
- Still very low page speed insights (33/100) (Google page speed test)

Figure 4-29 shows Google mobile friendly reports of the new The National Space Centre's website.

Figure 4-29 Website mobile-friendly report

In the researcher's opinion, a major limitation of the website is that it was not a mobile friendly website, but the museum's updated version is, as shown in Figure 4-29. As mentioned in section 2.5.2.7, being a mobile friendly website in very important as a lot of internet traffic is via smart mobile devices.

B: Main page design layout and elements

Figure 4-30 shows a picture of National Space Centre's old website taken in March 2014 and the main elements of it. The old website main page content many elements as listed below:

- The Museum name
- Museum logo
- Main bar including museums sections
- Main events
- Main activities
- Social media bars
- News
- Footer including (Hire, Education, Academy, NSC Creative, Social media, Mailing list and Contact us)

Many elements, as researchers have explained in section 2.5.2.1, may affect the website design and consequently its quality. These elements include the domain name, design colour, font, images and layout (Jones, 2010; The Internet Marketing Academy, 2011). These factors will have an effect on the customers' experience and their level of enjoyment (Oh et al., 2008). Poor design is highly likely to have a dramatic effect on the web presence of the museum and its visitors (Nielsen, 1998).

The website missed some important element like the museum shop in their old and new version. Otherwise, many of the website elements have been included in the museum's new website version. The old website version design layout is poor, in the researcher opinion, due to layout not fully optimized and not being mobile friendly. The new version of the website has corrected the above issues and in addition has become more user friendly.

As National Space Centre has redesigned the website in 2016, which is after the interview with the museum's staff, the researcher had no access to know the impact of this on the online engagement or door visitors.

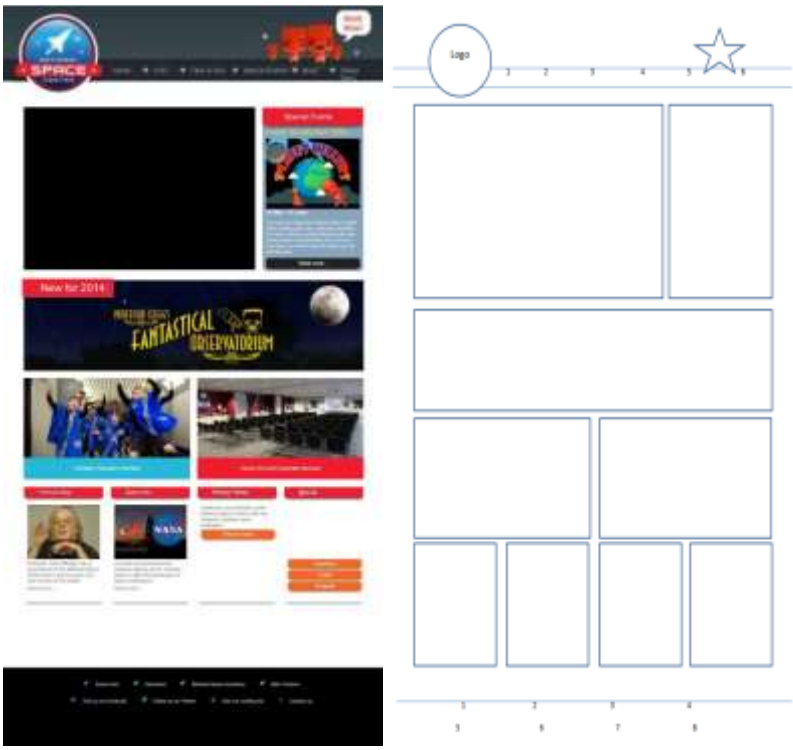


Figure 4-30 National Space Centre's old website and elements analysis

Figure 4-31 shows a picture of National Space Centre's new website taken in April 2016. The new website main page content many elements as listed below:

- The Museum name and logo
- Upper including (Jobs, Access, Press, FAC, Contact us, Book here and Search box)
- Main bar including (Home, Visit, What's on, What's here, Discover, Venue, Schools and Contact)
- Main rolling pictures
- Current information (Journey planning, Opining time and Weather)
- Opining times
- Find Us
- Book Here
- New news and coming events
- Contacts us form
- Map
- Social media icons
- Competition
- Footer including (About, Cookie Policy, Privacy Policy, Accessibility and Sitemap)

Figure 4-31 National Space Centre's new website

C: Updating/changing frequency

In addition, the researcher tracked the changes on the website main page over eleven months from 21/04/2015 to 21/03/2016. National Space Centre made a total of 130 changes during this period. Table 4-31 shows the changes dates and types. Calculating this means the average of updating the website is 0.37 changes per day or a change every two to three days.

As Shepard (2011) and Wowe (2013) mentioned the website should be updated with each event and at least once a month. However, with the case of National Space Centre, it seems that this updating frequency is good and following the museum's activities and news.

Table 4-31 Changes and dates of National Space Centre website

Date	Changes Old --------→ New
21/4/2015	
22/4/2015	
23/4/2015	
25/4/2015	
26/4/2015	
29/4/2015	
18/5/2015	
20/5/2015	
21/5/2015	
22/5/2015	
23/5/2015	
24/5/2015	
26/5/2015	
27/5/2015	
28/5/2015	
29/5/2015	
30/5/2015	
31/5/2015	
1/6/2015	
22/6/2015	
24/6/2015	
25/6/2015	
26/6/2015	
27/6/2015	
29/6/2015	
30/6/2015	
1/7/2015	
2/7/2015	

4.6.2 **Facebook**

As mentioned in section 4.3, the National Space Centre Facebook page was studied through analysing the platform profile design elements, in-depth observation of activities in the Facebook page and analysing the current situation. To start with,

Table 4-32 presents an overview picture by illustrating the Facebook page relative information.

Table 4-32 An overview on National Space Centre Facebook page

Feature	Details
URL	https://www.facebook.com/NationalSpaceCentre
Page name	Nationalspacecentre
Category	Attractions/Things to Do
Username	Nationalspacecentre
Firs post (available)	10/02/2009

Analysing the current Facebook page situating using online tools shows information presented in Table 4-33.

Table 4-33 National Space Centre Facebook page situating analysis (Correct as at 6/4/2016)

Feature	Details
Total likes	22,763
Like growth	7%
PTAT	6,417
Engagement rate	28.19% LikeAlyzer - 0.26% Karma
Other page liked	>10
Likes, Comments & Share per post	36
Post per type	Pic 29.2%, video 8.3% and Links 62.5%
Every one posting ability	Yes
Post by fans	daily
Response rate	36%
Response time	127 minutes
Hashtag usage	No
Profile performance	16%
Average weekly growth	N/A
Most comments times	15-18 pm (GMT)
Most comments days	N/A
LikeAlyzer rate	80
Average in same Category	58

The two tables above mentioned some important details about the museum Facebook page. It showed the page name, first post date, number of likes, like growth.. etc. These figures are useful in giving an general overview of the page and will help in comparing and discussion in section 4.7.

A: Facebook page profile design elements

Applying the eleven Social media elements on National Space Centre Facebook page (Figure 4-32) found that, it fulfilled all elements as shown in Table 4-34.

Figure 4-32 A picture of National Space Centre Facebook page

Table 4-34 Applying the eleven elements on National Space Centre Facebook page

Elements	Analysis
Name	Yes
Username	Yes
The museum Bio/Background	Information specified
The website link	Yes
Showcase the Museum's branding	Yes
Use the correct image sizes	Yes
Make designs visually consistent	Yes
Devote more space to images than to text	Yes
The placement of the profile picture	Yes
Considering platform's rules	Yes
Simplicity	Yes

The Museum Bio and background information and the link to the Museum website page appear clearly in the main pane and in the "About" page. Also, the image size has been considered very well. The Museum name and logo are presented in a good resolution.

B: In-depth Facebook activities observation

In depth observation of Facebook activities including; posts frequency, post timing, Post content type and engagements. The researcher observed the Facebook page for just under two months from 27th October 2014 till 23ed December 2014. The Museum posted 74 posts during this period (see Table 4-35) with the average of 1.3 posts per day. However, the postage was not in suitable frequency (see Figure 4-33).

Table 4-35 National Space Centre Facebook general statistics

Subject	Statistics
Total post	74
Likes at the beginning	13623
Likes at the end	14186
Total new likes	563
Total engagementd	732

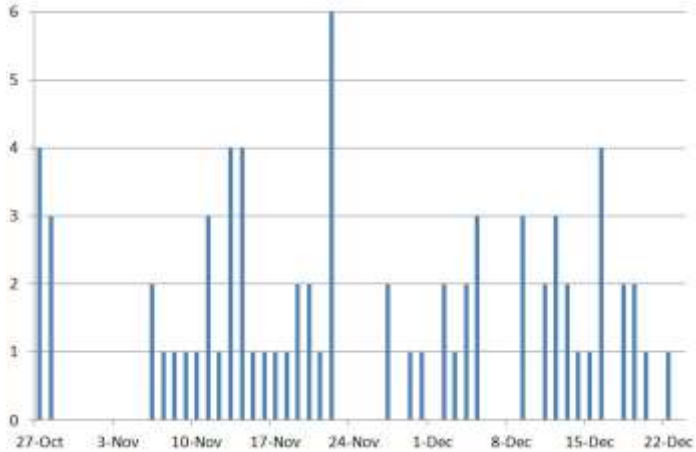


Figure 4-33 National Space Centre postage frequency

Figure 4-34 presents the Facebook page like growth. The observation started with 13,623 likes on the first day, growing up to 14,186 likes on the last day. This made 563 increases in likes within 57 days. Calculating these figures indicates that each post add one 7.6 likes.

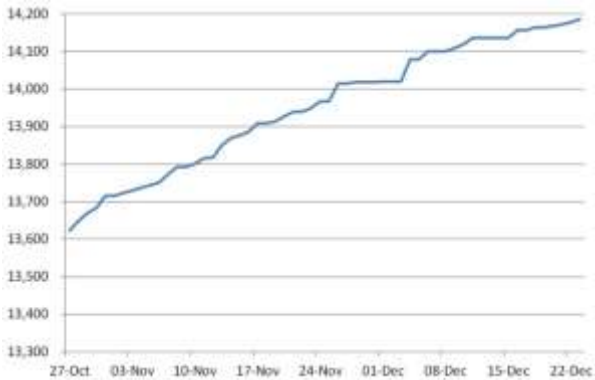


Figure 4-34 National Space Centre Facebook page like growt

4.6.3 Twitter

As mentioned in section 4.3, the National Space Centre Twitter account has been studied by analysing the platform profile design elements, in-depth observation of activities in the Twitter account and analysing the current situation. To start with, Table 4-36 presents an overview picture by illustrating the Twitter account relative information.

Table 4-36 An overview on National Space Centre Twitter account

Elements	Details
URL	https://twitter.com/spacecentre
Account name	@spacecentre
Username	NationalSpaceCentre
Joint	1st February 2009
Verified	No

Analysing the current Twitter account situation using online tools shows information presented in Table 4-37 .

Table 4-37 National Space Centre Twitter account situating analysis
(Correct as at 6/4/2016)

Feature	Details
Total tweets	7,782
Following	179
Followers	11.5K
Likes	311
Lists	1
Listed	390
User mention	1,147
Links	1,941
Average Links per tweet	0.61
Retweets	628
Percentage of retweets	20%
Replies	657
Percentage of replies	21%
Hashtags	437
Average hashtags per tweet	3.29
Tweets retweeted	1,423
Tweets favorited	1,188

From the tables above, National Space Centre has reached 11,500 within about 7 years and 2 months (86 months), from 1st February 2009. This is calculated to over 133.7

new followers per month. In addition, each tweet added just about 1.47 followers to the profile. These figures and other figures from the tables above will analysed in discussion in chapter discussion 4.7.

A: Twitter page profile design elements

Applying the eleven Social media elements on National Space Centre Twitter account (Figure 4-35) found that, it fulfilled all of the elements as shown in Table 4-38.

Figure 4-35 A picture of National Space Centre Twitter account

Table 4-38 Applying the eleven elements on National Space Centre Twitter account

Elements	Analysis
Name	Yes
Username	Yes
The museum Bio/Background	Information specified
The website link	Yes
Showcase the Museum's branding	Yes
Use the correct image sizes	Yes
Make designs visually consistent	Yes
Devote more space to images than to text	Yes
The placement of the profile picture	Yes
Considering platform's rules	Yes
Simplicity	Yes

Table 4-38 above presents the elements that National Space Centre has considered in their in their Twitter account profile. These parameters are vital to

improve the museums twitter engagement and clearly the National Space Centre is aware of this.

B: In-depth Twitter activities observation

In depth observation of Twitter activities included; posts frequency, post timing, Post content type and engagements. The researcher observed the Twitter account for just under two months from 27th October 2014 till 23rd December 2014 (See Table 4-39 for all observation general data). The Museum has tweeted 102 tweets during this period, and a total of 77 responses between liking other tweets, retweeting other tweets and replaying to other tweets. The average of their own tweets was just under 1.8 tweets per day. However, the tweeting was not in suitable frequency as Figure 4-36 shows the day tweeting frequency.

Table 4-39 National Space Centre Twitter general statistics

Subject	Statistics
Total Tweets	102
Total liked	6
Total Retweeted	55
Total replaied	16
Total respones	77
Total engagementd	69907

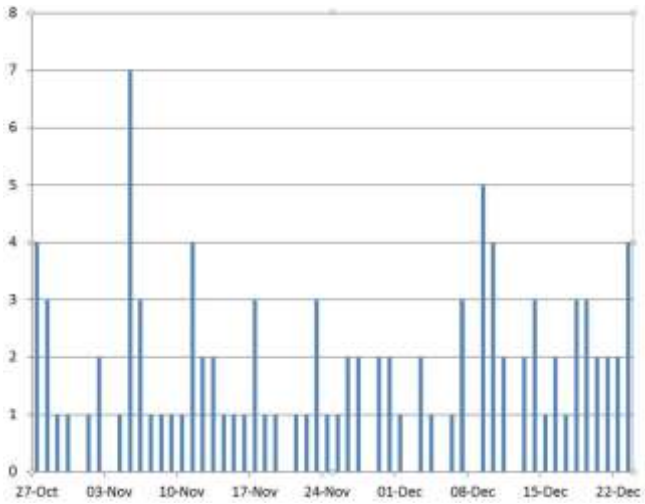


Figure 4-36 National Space Centre Twitter posts per day

Figure 4-37 presents the Twitter followers growth. The observation started with 8,414 followers on the first day, growing up to 8,639 followers in the last day. This made

1225 increases in followers within 57 days. Calculating these figures presented that the museum average tweet is 1.8 tweets per day and each tweet add 12 new followers.

Figure 4-37 National Space Centre Twitter followers growth

The outcomes of these figures above will help in comparison and chapter analysis in the next section 4.7. The graph shows a significant upward positive trend in the number of followers.

4.7 Chapter analysis and discussion

These primary research observations were required as the researcher has to observe in depth web presence of selected museums in Saudi Arabia and the United Kingdom. This is in order to examine the existing web presence to museums in and countries. This discussion considered the findings from the literature review on the web presence engagement between museums and audiences with the findings from the primary research observations.

The researcher will collate the above observations and present the information broken into the three main components: web usage, Facebook usage and Twitter usage. This discussion might be useful for developing the questionnaire in chapter 5 and the interviews in chapter 6. Also, it helped in the development of the proposed framework.

4.7.1 The website usage

As the website was analysed by evaluating the Museum's web-design features checklist, analysing the website design layout and observing the changes and updating frequency, each of these elements will discussed in the following:

Three out of the four observed museums (National Museum KSA, Dar Al-Madinah Museum and Birmingham Museum) have created their websites after 2010. However, the museum website plays a fundamental role in the museum online marketing strategies as mentioned by Go (2012). It is important to ensure that websites are kept up to date with advancement in design and with changes in user requirements with time such as multimedia incorporation within website.

4-40 General information about the museum website

Museum	Date of creating the website	Becoming mobile friendly	Museum's web-design features checklist	Updating frequency	Global rank (Correct as at April 2016)
National Museum (KSA)	29/10/2011	Not yet (August 2016)	72/174	1.45 Per month	2,687,051
Dar Al-Madinah Museum	3/9/2013	December 2015	93/174	1.9 Per month	11,904,642
Birmingham Museum	9/3/2012	April 2016	160/174	1.0 Per month	653,792
National Space Centre	13/4/1999	Late 2014	90/174	11.0 Per month	601,182

The table above shows that none of the 4 museums website were mobile friendly until at least 2014, however it is interesting to note that the British museums adopted mobile friendly websites earlier then KSA museums. Dar Al-Madinah museum website only developed their website to be mobile friendly as part of this research project, see chapter 8.

The website updating frequency was between 1-2 times per month for all museums except the Space Centre where 11 times per month. Baye et al. (2014), Zaghoul et al. (2014) and Gudivada et al. (2015) have mentioned that updating the website frequently and keeping it up to date can result in better search engine rankings and therefore an increased number of the website sessions(visitors). The Table 4-40 above shows the global webiste ranking for the museaums and it can be clearly seen that the museums in the UK has a much higher ranking compared to KSA.

The data above also shows that the highest ranking museum (NSC) has also the highest frequency of website changes. This may support Baye et al. (2014), Zaghoul et al.

(2014) and Gudivada et al. (2015). The other UK museum, namely, Birmingham museum, started to update more freuquently after 2014 (this was confirmed with discussion after the research data period as per the researcher interview with the musuem, see chapter 6.

Branding is fundamental for museums and should be considered in the museum's website (Kotler et al., 2008; Appel, 2015; Hamed, 2015). Branding gives the museum value and creates audience trust (Rentschler and Reussner, 2002; Gensler and Völckner, 2013), as mentioned previously in section 2.5.2.5. Branding considerations were not clearly addressed for The National Museum of KSA and Dar Al-Madinah Museum in the opinion of the researcher. This is supported by the fact the two museums have used five font types and no colour scheme is considered, see section B on case study 1 and 2. According to PARK and URIBE (2008) and Morris and Ed(2014), not more than three fonts should be used in the website.

Museum's websites are recommended to have more than one language to appeal to bigger range of audience. Choice of languages will gives the museum website a chance of wider spread, Conway (2011) and Mohamadesmaeil and Koohbanani (2012) mentioned. Only The National Museum of KSA has two languages in their website, Arabia and English.

4.7.2 Facebook usage

As mentioned in section 4.2, this discussion excluded The National Museum of KSA, because they do not have any social media platforms.

Images, followed by website links, are the most frequently posted content on Facebook. According to LikeAlyzer website (as mentioned in section 4.6), National Space Centre was considered to have the highest engagement rate of 28.19% with other museums low rate of 2.58% (Dar Al-Madinah)and 4.42%(Birmingham Museum). The literature review (section 2.7) has shown that better engagement rate results in more visitors.

Birmingham Museum and National Space Centre have fulfilled most of the Facebook page design elements. In contrast, Dar Al-Madinah Museum did not mention their information in the Bio of the Facebook page. Also, the image size was poor.

With regards to Facebook activities, Birmingham Museum has the highest Facebook efficiency. They gain over 18 likes per post in average, whereas they are not the highest rate in posting frequency, this maybe because of the post appealing to the audience (see section 2.5.2.7). (see Table 4-42 below for comparison)

4-41 Analysed museum's general Facebook information

Museum	Date of first post	likes	Like growth	Engagement rate	Post / day	Like/ day	Like /post
Dar Al-Madinah Museum	2/10/2011	5,048	3.21%	2.58	0.15	1.56	9.88
Birmingham Museum	13/9/2008	18,856	7%	4.42	0.53	8.4	15.3
National Space Centre	10/2/2009	22,763	7%	28.19	1.3	10.5	7.6

National Space Centre posted on average of 1.3 posts per day comparing with 0.53 posts per day for Birmingham Museum. Both Birmingham Museum and National Space Centre had about 565 likes by the end of the observation period with slight higher for Birmingham Museum. This finding suggests that the number of posts in Facebook could be one to two posts per day and still could have a good engagement. Broadhead and Carroll (2001) in their opinion said that social media requires posts to be made on a daily basis. However, that could be varied between social media tools and also related to the tactics of posting such as timing and contents as Lee (2016) mentioned.

4.7.3 Twitter usage

As mentioned in section 4.2, this discussion excluded The National Museum of KSA, because they do not have any social media platform.

Birmingham Museum and National Space Centre have joined Twitter four years before Dar Al-Madinah Museum. The average number of posts of Dar Al-Madinah Museum and National Space Centre are under five tweets per day which is very low

compared to Birmingham Museum which has an average of over 19 tweets per day. Moreover, the Birmingham Museum has the highest number of followers with just under 34,000 (see table 4-43).

4-42 Analysed museum's general Twitter information

Museum	Date of join twitter	followers	Twitter page profile design elements	Tweet /day	Followers /day	Followers /tweet	Engagements /tweets
Dar Al-Madinah Museum	8/11/2013	7563	8/11	0.73	6.1	8.25	41.35
Birmingham Museum	1/10/2009	33.9K	9/11	3.14	5.6	5.59	160.58
National Space Centre	1/2/2009	11.5K	11/11	1.8	1.8	12	685.36

From the table above, the Birmingham Museum has engaged the most with follower's tweets with total engagement of 82%. They have made 71% retweets and 11% replays. National Space Centre has made 21% replays and 20% retweets. Dar Al-Madinah Museum has made 18% replays and 48% retweets. During the observational study, and National Space Centre and Dar Al-Madinah Museum have responded (like, replay or retweet) 77-79 times to their followers in contrast with Birmingham Museum which has responded 1187 times. Research has shown that better engagement with social media results in more museum visitor as mentioned above (see section 2.7).

On the other hand, the National Space Centre has about 70,000 of follower's engagements (like, replay or retweet), Birmingham Museum has about 29,000 and the lowest engagements were for Dar Al-Madinah Museum with just about 1700 (like, replay or retweet). In other words, Dar Al-Madinah Museum tweeted about 8 times per week and engaged about 77 times with their audience and Birmingham Museum has tweeted about 22 times per week and engaged about 1187 times with their audience. The National Space Centre tweeted about 12 times per week and engaged about 77

times with their audience; however, they have the highest audience engagement with nearly 70,000.

Langa (2014 p491) said that "Twitter does not help museums to engage with visitors". However, tweeted content could be one element strongly affecting the audience engagement. Dibb and Simkin (2004), Nekatibeb (2012), AlSamman (2014) and Chaffey (2015b) are emphasises that Museums have to consider what specific content they want to share with their specific target audience, in order to gain the most engagement. Although the researcher has shown in these case studies, that high number of tweets meant higher audience engagement, it is accepted that this is not the only factor that affects museums online engagement and actual number of visitors. Murthy (2011), Alexandria(2015), Loredana (2015) and Baltes (2015) also support this argument and added, choosing the right frequency and the right content are the key elements for increasing audience engagement.

4.8 Conclusion

In this chapter, the researcher set out to observe in depth the web presence of four selected museums in Saudi Arabia and the United Kingdom. This in depth study supported the critical review in chapter two and has provided a useful contribution to build the questionnaire and the interview of this research. The observational case studies of these museums web presence presented activities and audience engagement of selected museums during the period from 27 October 2014 to 23 December 2014. These in depth web presence observations have included observing activities such as:

- The website design check-list, main page layout element analysis and updating frequency.
- Facebook page posting times, content type (in terms of images, videos or links) and how much engagement that these posts had (Likes, chare and comments).
- Twitter account posting times, content type (in terms of images, videos or links) and how much engagement that these posts had (retweets, replays and likes).

First of all, a case study protocol has been developed to present how the researcher will observe and analyse the museum's websites, Facebook and Twitter

profiles. The websites were analysed by evaluating the museum website using the Museum's web-design features checklist, analysing and observing the main page layout and observing updating frequency. The social media platforms analysed through the profile design and observing all activates and engagements during the specified period.

The researcher used different tools to help in observing the websites, Facebook and Twitter profiles. Most of tools that used in this study are free or partly free tools except one. SPSS software has used for statistical analysis of quantitative data which generated from the observation.

This phase of the research project has shown that all of the museums website were not mobile friendly in the earlier part of the data gathering. The literature review has shown it is very important to be aware of changing internet habit of users such as mobile internet. This has now become the most widely used method to browse the internet (for further details see sections 2.3.6, 2.5.2.3 and 2.5.2.7). Museums in UK were earlier adopters of mobile friendly website.

In terms of branding consideration, it has been shown that, generally, museums in UK were better branded in design consideration then the museums in KSA.

Social media platforms are widely recognised as very important to attract more online engagement and physical visitors as mentioned in section 2.7. The researcher has found that there is a direct relationship between museums that are more active on social media and the rate of online engagement. There is a clear difference between the museums in KSA and UK in level of social media engagement. Museums in UK are much more socially active on Facebook and Twitter platforms and this may account for their higher popularity ranking as compared to museums within KSA.

The different case studies that were observed in this chapter will influence the developing the framework from several interwoven values. Their websites were mainly influenced by the website performance design elements, branding consideration and the posting frequency. Also, their social media platforms (namely, Facebook and twitter) were influenced by the profile page design, posting frequency and posting content, branding consideration and the level of engagement with audience. Therefore, these elements have been influenced in derivation of the potential framework.

Finally, this discussion is useful and essential for developing the questionnaire in chapter four and the interviews chapter five. Also, it helped in the development of the proposed framework. It identifies factors which may be involved in lower rate of engagement for museums in KSA such as poorer quality of web presence and lower rate of social media engagement. It has also helped in identifying specific questions which may be useful to explore in the next chapters of the research questionnaires and interviews with the museums staff in KSA and UK.

CHEPTER FIVE

QUESTIONNAIRE SURVEY OF MUSEUM VISITORS IN SAUDI ARABIA

5 QUESTIONNAIRE SURVEY WOTH MUSEUM VISITORS IN SAUDI ARABIA

5.1 Introduction

This chapter presents the primary research findings from the questionnaire survey carried out in this study to identify the core issues and problems faced by visitors to museums in Saudi Arabia. This primary research is required as the researcher has to identify the current problems faced by museums in order to confirm the statement of the problem introduced in the introduction chapter of this research.

The literature review showed that the current problem in designing the web presence for museums in KSA is the lack of web engagement between the museums and the audience. This is due to the fact that the number of museum staff trained to deal with the web presence is limited and is less than proportionate to the need of the museum and, consequently, the web presence of museums is poor. However, the country is considered to have one of the fastest growing internet infrastructures and web presence traffics in the region and has a rapidly growing number of web and social media users (see section 2.4).

In light of the above, and as discussed in detail in Chapter three, a questionnaire survey was used to confirm the nature of these problems. The survey was administered to museum visitors in Saudi Arabia to identify the lack of web presence design and to recommend suitable actions for modification or correction and for developing the proposed framework.

5.2 Design of the questionnaire

The wording of the questions was considered by the researcher when designing the questionnaire to determine the order and appropriateness to the research area. Foddy and Foddy, cited in Gibbs (2013) mentioned that the development of survey questions is a complicated procedure that aims to enhance the interaction between the researcher and the respondent to specify a shared meaning.

5.2.1 Survey questions

The questionnaire is outlined in Appendix :B . Questionnaire for people visiting museums. There were a total of four main sections in the questionnaire. Each section is described in more detail below:

1) The first section of the questionnaire aimed to collect demographic background information on the museum visitors, covering gender, age and nationality.
2) The second section concentrated on obtaining data about the museum's website. It covered the reasons that led the museum visitors to visit or use the website and its usability, and also investigated the visitors' opinions about the design and the content of the web pages using Yes/No and open-ended questions, as discussed in detail in section 4.4.
3) The third section focused on obtaining data about the museum's social media by asking the participants if they engaged with any of the museum's social media tools and/or if they had ever seen any of the museum's posts on any social media platforms. If they have seen any posts on any social media platforms, it also asked them about their opinions over whether they found these useful or not.
4) The last part of the questionnaire asked the museum visitors about their opinions regarding the importance of the web presence for the museum, including the website and social media.

5.2.2 Types of responses in the questionnaire

Three types of questions were used in this questionnaire. Yes/No, multiple-choice and open-ended questions. Yes/No responses were used for questions 2, 4–8, 10, 12–14, 15 and 17. There were also multiple-choice responses provided for questions 1, 3, 16 and 18, shown in Table 5-1 below. Finally, there were two open-ended questions to collect qualitative data; these were questions 9 and 11. The researcher avoided using a Likert scale to give the participant the chance to provide a definite response (Yes/No) and, to avoid participant answers being influenced by previous questions (LaMarca 2011) (See appendix B).

Table 5-1 Multiple-choice answers used for questions 1, 3, 13, 15 and 18

Choice	Description
1	Knowledge (General knowledge about the museum like museum history etc.)
2	Information (Specific information like opening times etc.)
3	News
4	Fun
5	Other

5.3 Survey process

As mentioned in section 3.9.1, simple random sampling was chosen to select the sample for the questionnaire survey. The questionnaire survey was on paper and was disseminated by the researcher at the entrance of Dar-Al-Madinah Museum, Saudi Arabia. The researcher followed a SOP to ensure the consistency and quality of the process to maximise the research uniformity and the reliability of the outcomes, as mentioned in section 3.12.

The researcher agreed with the museum that the questionnaires would be disseminated over a period of defined time as mentioned in section 3.8.1. The total number of respondents was 57.

5.4 Analysis of the data from the visitors' questionnaire results

This questionnaire survey was applied after the pilot survey which was used to ascertain the workability and reliability of the research instruments adopted for this research project (see section 3.14). The results of the pilot survey are not included in this survey. The survey was carried from the 13th to 24th August 2014 at Dar-Al-Madinah Museum, Saudi Arabia. A total of 90 questionnaires were distributed and a total of 57 questionnaires were returned, resulting in a 63.33% response rate. (more details are provided in section 3.9.1). The next section present and discuss the results.

5.4.1 Demographic and background details

The collection of participants' demographic and background details was included in the design of the questionnaire. The aim of collecting demographic and background details was to determine how close the sample replicates the population. It also enables the researcher to find out if there is any relationship between different sub-groups and the survey responses.

The analysis is presented in Figure 5-1, Figure 5-2 and Figure 5-3 below, which show that the sample contains a wide range of backgrounds and age groups and also contains both males and females, although males seem to constitute more of the museum visitor sample than females.

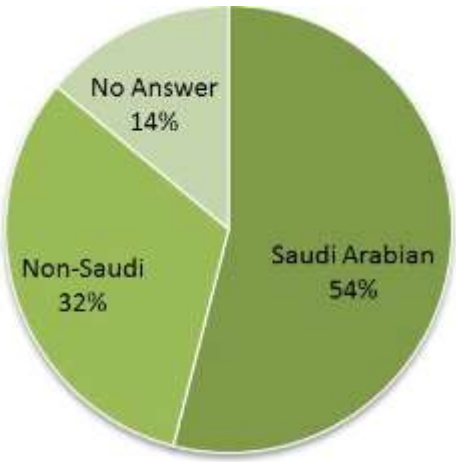


Figure 5-1 Visitors' nationality background

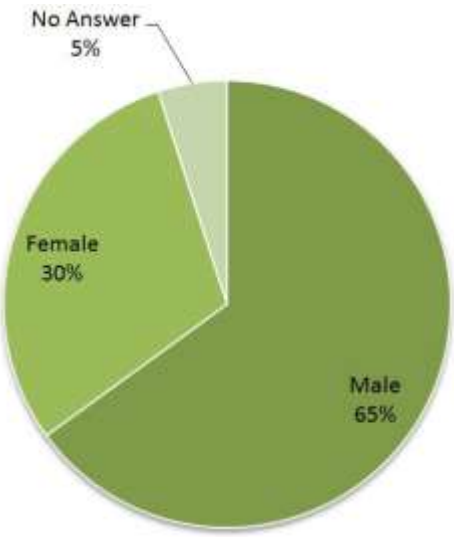


Figure 5-2 Visitors' gender distribution

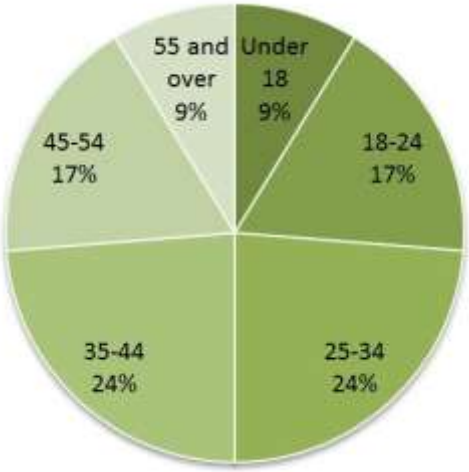


Figure 5-3 Visitors' age group distribution

The demographic data above present the Saudi Arabian population without any great bias to any gender or age group. According to the General Authority for Statistics on the Kingdom of Saudi Arabia (2014), just under 57 per cent of the general population in Saudi Arabia are male and just over 43 per cent are female.

Figure 5-4 shows the results based on the responses to the question regarding how the visitors heard about the museum.

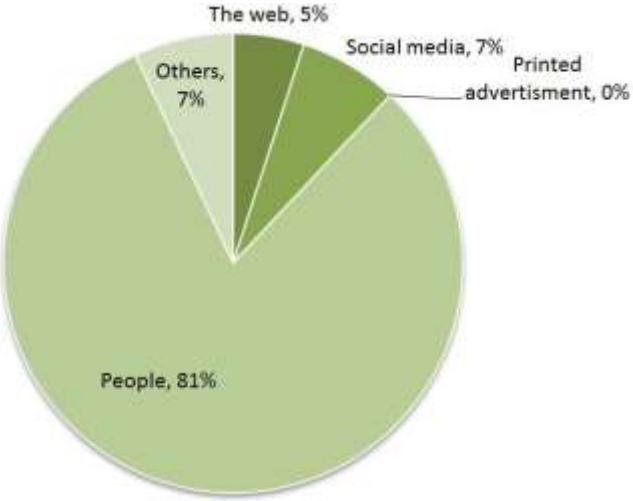


Figure 5-4 The ways visitors heard about Dar-Almadinah museum

As can be seen in Figure 5-4 above, the highest proportion (over 80%; about 40% females and 60% males) of visitors heard about the museum from other people; this means that word of mouth seems to currently be the main method of publicising the museum. It can also be concluded that just only one fifth of people heard about the

museum through all other advertisement channels, including the web presence (website and social media which was only 12 percent).

5.4.2 Use of the web by museum visitors

The second section of the questionnaire was about the museum website. It aimed to find out if the visitors have seen the museum's website and if so, why and what is their opinion about it? The researcher explained the survey multiple-choice options to the participants, which included: General knowledge about the museum such as the museum background and history, seeking information such as opening hours and the location, Following the news or other reasons. 78.94% of participant have not seen or used the museum's web site. The rest of the 21% have used the museum website for seeking general knowledge about the museum or specific information such as; opening times or contact details. The results obtained from this section are shown in Figure 5-5.

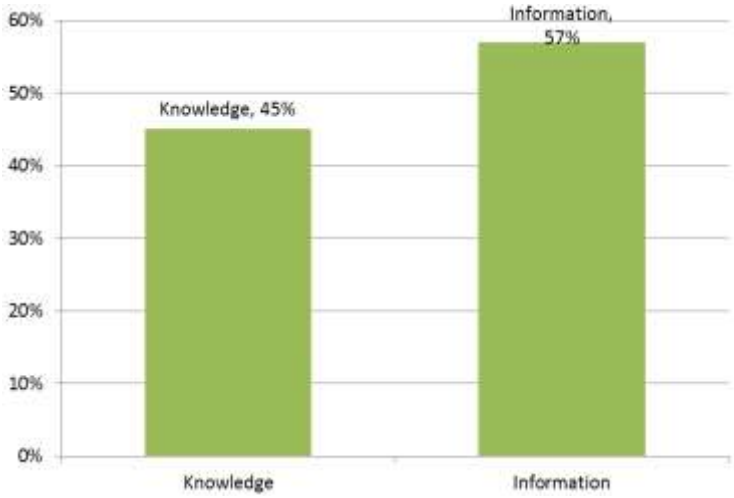


Figure 5-5 The reasons for visiting the Dar-Al-Madinah museum website (question number 3)

As can be seen in Figure 5-5 above, all the visitors to the museum website were looking for knowledge and information on the museum. There also seems to be a small difference between the people looking for knowledge or information, with a slightly higher number of visitors looking for museum information.

In addition, Questions 7 - 10 investigated what the participants thought about the museum website:

Q7: Do you think the website is easy to use?

Q8: Do you think the web site well designed?

Q10: Do you think the website has appropriate content?

There were two open-ended questions following these questions if they answered "No", Questions 9 and 11, which were included to provide the visitors who were critical of the museum web design and content with an opportunity to state their reasons and opinions. As none of the respondents answered "No" to Questions 7, 8 and 10, they did not need to give answers to Questions 9 and 11. Just 21% of participant answered these questions. Fewer than 16% answered positively and about 5% were not sure.

5.4.3 Visitors' opinions about the museum's social media

The aim of the third section of the questionnaire was to find out the extent of museum visitor engagement with the museum's social media platforms, and visitors' opinions about the museum's activities on social media. Figure 5-6 below highlights the results obtained from 57 participants who answered this question.

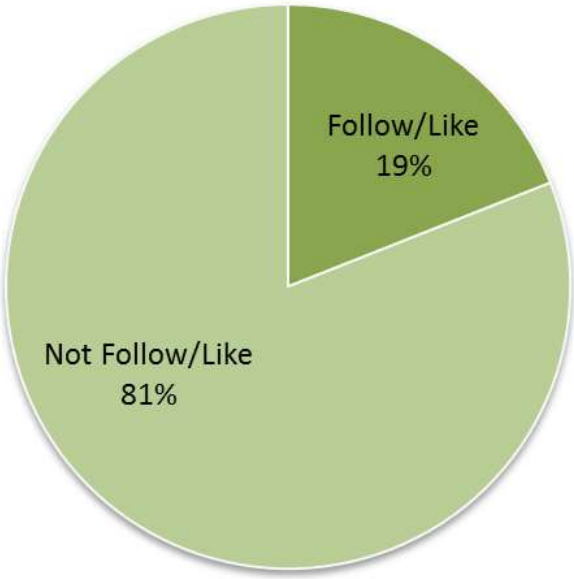


Figure 5-6 Engagement of visitors with the museum's social media

As can be seen in Figure 5-6 above, there were just ten visitors out of fifty-seven (just 17.5%) who followed or liked the social media platforms of the museum and all of these respondent had seen social media posts for the museum and thought that these posts were useful. Most respondent (82.5%) were not engaged with the museum's social media.

5.4.4 The visitors' opinions about the museum's web presence

The last section of the questionnaire aimed to find out visitors' opinions about the potential importance of the web presence for museums, including the website and social media, and the reasons for the attributed importance. The results are shown in Figures 5–7 and 5–8 below.

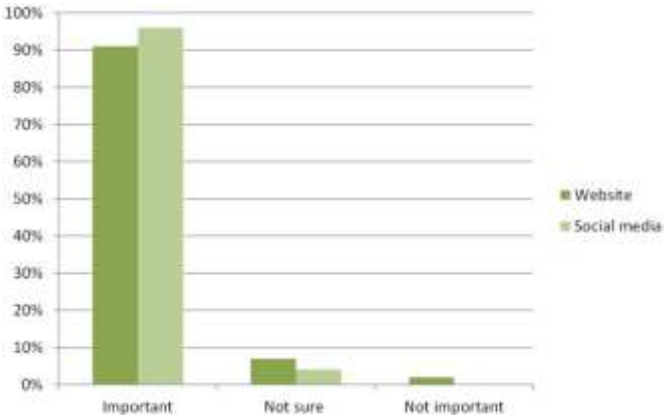


Figure 5-7 The importance of the web presence according to the museum visitors

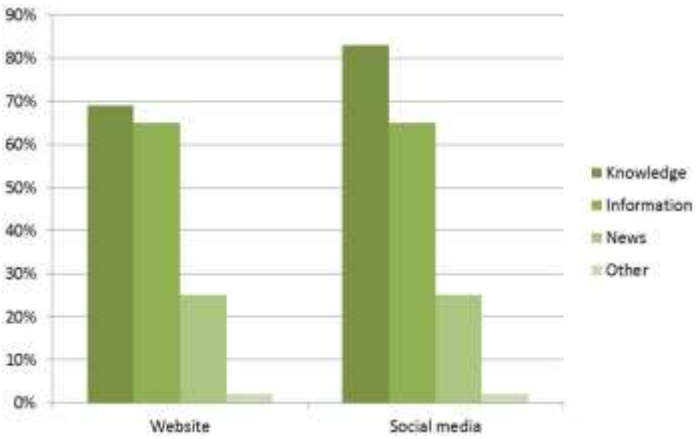


Figure 5-8 The visitors' opinions about why the web presence is important

The overall results from this section of the questionnaire show that all visitors believed that the web presence, including the website and social media, is important for the museum. However, there was very little difference in the use of different web channels by visitors to access different services such as knowledge and information. 91.22% of participants think that social media is more important than the website (85.96%) for museums.

5.5 Chapter discussion and conclusion

This primary research was required as the researcher has to identify the current problems faced by museums and museum visitors in order to confirm the statement of the problem introduced in the introduction chapter of this research. The results of the questionnaire survey with museum visitors in Saudi Arabia carried out in this study have provided enough evidence to answer research question number two, which is about the perceptions of visitors regarding the existing web presence of museums in Saudi Arabia and the answer to this, is that there is a problem in using web presence effectively from the museums in Saudi Arabia. This is clear from the percentage of participants (82.5%) that were not engaged with the museum's social media or have not seen the museum's web site (78.95%).

Despite the fact that the information revolution and the internet has spread widely in Saudi Arabia and reshaped its culture (Nazer 2014) and about two-thirds of the Saudi population are using the internet (Internet Live Stats 2015), museums there are still far away from using the internet to promote themselves (Hamed and Higgett, 2014). The primary survey conducted with museum visitors in this study has made this clear as it found that only about 20 percent of visitors (Figure 5-4) have heard about the museum through the internet. This has also been asserted by Abu Al-Khair (2010), the media doctor and museum owner, and Tariq Al-Jbear, a museum official in Riyadh (Ibraheem et al. 2010; AlRiyadh 2012).

Considering the museum as an organisation that aims to bring about cultural communication and is more open to regional knowledge, public memory and cultural variety (Russo et al. 2007; Lehman & Roach 2011), and considering the revolution of the development of the internet and the correlation with new technology, there are limits to how far museums in Saudi Arabia have engaged with their audiences through online tools. The primary survey conducted with museum visitors found that just under 20 per cent of museum visitors have followed or liked posts on the museum's social media platforms (Figure 5-6). However, the use of digital channels has become a part of people's culture in Saudi Arabia, which is called the digital culture (Pallas & Economides 2008). Moreover, in order to survive, museums in developed countries are making concerted efforts to make culture and heritage digitally available (Pallas & Economides

2008). Considering what was mentioned earlier that there are actually just a few museums in KSA taking advantage of the internet out of about 140 museums in the whole country (see Appendix : A). Only five museums have or used to have a website, and only a hand full have or used to have a social media account (Hamed and Higgett, 2014; Hamed, 2015) and this compounds the problem.

In this digital age, the internet, without any argument, is one of the fastest growing technologies the world has ever seen(Chai et al. 2009; Mirza 1998). The Saudi Arabian government spends large sums of money in providing its residents with the latest technology, resources and services available in the modern world (Mirza, 1998). Saudi Arabia is fully on the way to building an information-based community and social networks play an essential leading role in different parts of Saudi society (CITC, 2009; Askool and Nakata, 2010). This was emphasised by the primary survey results presented in this chapter. It concluded that almost all visitors (Figure 5-7) believe that the web presence, including the website and social media, are important for museum communication in Saudi Arabia.

Finally, it can be concluded from the conducted survey on the museum visitors in Saudi Arabia that just a small number of visitors are aware of the website or the social media of the museum. These visitors tended to use these web channels mostly for obtaining specific information such as opening times and the address and general knowledge and background about the museum before visiting the museum. On the other hand, most visitors had only heard about the museum though friends or other people, not via online channels. It is possible, taking into consideration the other evidence from interviews with museum staff in Saudi Arabia presented in Chapter Six, that these trends are related to, or at the very least are compounded by, the lack of web presence design and online marketing or the fact that where it does exist it is of poor quality (see chapter four).

CHAPTER SIX

INTERVIEWS WITH MUSEUM STAFF IN KSA AND UK AND DIGITAL MARKETING EXPERTS IN UK

6 INTERVIEWS WITH MUSEUM STAFF IN KSA, UK AND DIGITAL MARKETING EXPERTS IN UK

6.1 Introduction

This chapter presents the primary research findings from the interviews carried out in this study. The interviews aimed to investigate the core issues of identifying the existing strategies used by museums in Saudi Arabia for designing web presence strategies, and identifying the design of web presence strategies used by museums and organisations in the UK to effectively engage with visitors and increase visitor numbers.

The literature review showed that the current problem in web presence design for museums in Saudi Arabia is the lack of web engagement between museums and the audience. This is due to the limited number of museum staff trained to deal with web presence and, consequently, web presence is in a poor state in museums. However, the country is considered to have one of the fastest growing internet infrastructures and web presence traffic in the region and a rapidly growing number of web and social media users (see section 2.4).

This primary research is needed as the researcher has to investigate the current problems faced by museums in order to confirm the statement of the problem introduced in the introduction chapter of this research. The research also tries to identify through interviews some examples of best practice in the web usage of museums and organisations in the UK, which might be useful for the development of the framework. To address the broader objectives of considering the web presence of museums in both counties, the primary research focused on the staff of selected museums in the KSA, the staff of selected museums in the UK, multimedia design and digital marketing experts in the UK.

Saudi Arabia is a developing country and is the researcher's home country. The context of the study has many similarities with the UK context, where the researcher is carrying out the study. The main cultural difference is that in KSA, Islamic faith plays a big part of daily life and therefore it is not acceptable to talk about any anti-Islamic or pornographic content and any content which criticises the country or the Royal Family are blocked (this is mentioned in detail in 2.3.5). Furthermore, the research area relating

to web presence and the associated online marketing strategy is of a global nature. Since there are similarities between the contexts of the KSA and the UK, the primary research was focused on determining the problems faced by museum staff in the KSA and how these have been addressed in the UK.

This part of the research study was conducted with the intention of improving the working situation in Saudi Arabia by benefitting and learning from the UK experience where applicable to the Saudi context. Therefore, the researcher conducted primary data collection by including respondents from both Saudi Arabia and the UK. The primary research data collection in this chapter was divided into three sections:

1) Interviews with museum staff in Saudi Arabia
2) Interviews with museum staff in the UK
3) Interviews with online marketing experts in the UK

The qualitative methods of this study and interviewing techniques are described in detail in section 3.4.1.2.

6.2 Design of the interviews

As mentioned in Chapter Three, there are three main types of interview: structured, semi-structured and unstructured interviews. The strength of unstructured interviews is represented by their complete freedom in structure and content. A particularly useful feature of this type of interview is that the researcher can raise a question regarding an answer to another question. On the other hand, structured interviews do not require a full understanding of interviewing skills, unlike unstructured interviews (see Figure 6-1) (Kumar, 2012). Semi-structured interviews stand in the middle between structured and unstructured interviews and they can combine the advantages of both types. The semi-structured type of interview was chosen for this study because it is well adapted for the discussion of the perceptions and opinions of respondents regarding specific and sometimes sensitive issues and enable inquiring more information and clarification of answers when needed. Second, the type of the sample group precluded the use of a SOP.

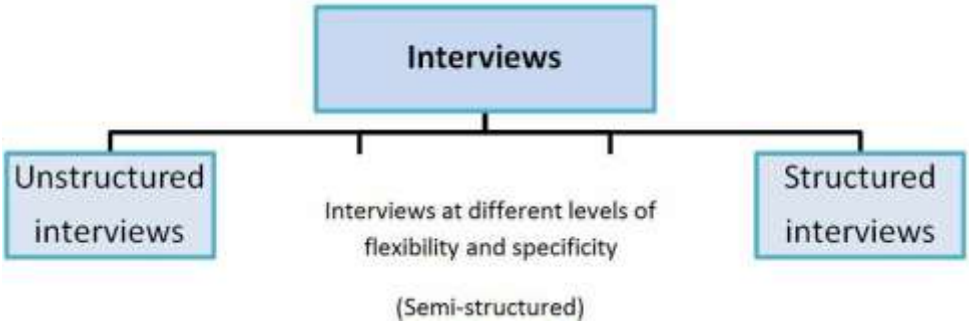


Figure 6-1 Types of interviews

Source: R. Kumar (2005)

As mentioned above, semi-structured interviews were used to determine current usage of the internet and social media in selected museums. Interviews were conducted with six members of staff in two museums in Saudi Arabia which were accessible to the researcher: The National Museum of Saudi Arabia and Dar-Al-Madinah Museum. Interviews were also conducted with staff from two museums and two online marketing experts in the UK. The interviews aimed to understand what the museums are doing and to describe/illustrate their existing usage of the web and social media (more details of qualitative research approach are provided in Chapter Three).

The interview questions were divided into four parts. The first part elicited demographic information about the participants. The second part consisted of ten questions related to the museum websites. The third part consisted of twelve questions related to social media. The last part consisted of six questions about traditional and e-marketing.

6.2.1 Part One: Demographics and background data

The first part of the interview was used to obtain the following general demographic details about the participants:

- Name
- Position
- Gender
- Nationality
- Telephone number
- Email address

6.2.2 Part Two: Web usage

This part of the interview consisted of ten questions about web usage, including the following items:

- His/her opinion about the importance of the website for the museum.
- His/her opinion about reaching the audience through the website.
- The main purpose of using the website for the museum.
- The content of the website.
- The frequency of updates of the website.
- Notifying the users about the updates.
- Evaluating the effectiveness of the website.
- The designer of the website.
- His/her opinion about the design of the website.
- The research behind the design.

6.2.3 Part Three: Social media usage

This part of the interview consisted of the following eleven items about social media usage:

- His/her opinion about the importance of social media.
- The relation between the users of the website and social media.
- His/her opinion about reaching the audience through social media.
- The main purpose of using social media for the museum.
- The content of social media.
- The design features for developing content for social media.
- Posting frequency on social media.
- Social media platforms they are using and the reason for using them.
- The person responsible for the social media of the museums.
- His/her opinion about the future of social media.
- Evaluating the effectiveness of social media.

6.2.4 Part Four: Marketing

This part of the interview consisted of the following four items about e-marketing:

- The other traditional promotional tools used by the museum.
- The museum's e-marketing.
- Online marketing strategy and what it is.
- Databases and electronic newsletters.

The museum staff interview questions are attached in Appendix E.

6.2.5 Considering the difference between museum staff and online marketing experts

The researcher took into consideration the difference between museum staff and online marketing experts in formulating the questions. The wording of the questions was changed to fit the interviewee as this encouraged a better response, for example:

- How are you notifying the users about the updates on your website?

  Changed to:

  How can a museum notify users about the updates on their website?
- What is the online marketing strategy for your museum?

  Changed to:

  What is the best online marketing strategy for a museum from your point of view?

6.3 Interviews with museum staff in Saudi Arabia

The interviews with the museum staff in Saudi Arabia were conducted in August 2014. There were six interviewees from two museums. Four interviewees were from The National Museum of Saudi Arabia and two were from Dar-Al-Madinah Museum. The duration of each interview was about 30 minutes. All of the information about the rationale for choosing these museums is available in detail in Chapter Three of this thesis (section 3.10) (See Appendix G for full interview's results)

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6.3.1 Demographics and background details

The demographics and background details of the museum staff who participated in this research are presented in Table 6-1 below. Four members of staff from the National Museum of Saudi Arabia and two from Dar-Al-Madinah Museum were interviewed.

Table 6-1 The demographics and background details of the museum staff in the KSA

Museum	The National Museum of Saudi Arabia				Dar-Al-Madinah Museum	
Participant Code	N-1	N-2	N-3	N-4	D-1	D-2
Gender	Male	Male	Female	Female	Male	Male
Nationality	Saudi Arabian	Saudi Arabian	Saudi Arabian	Saudi Arabian	Saudi Arabian	Saudi Arabian
Position	The general manager	Head of programmes and visitor relations	Head of visitors relations and the website	Head of marketing department	The owner	The general and website manager

6.3.2 Web usage

The second part of the interview questions was about the web usage of the museum. This section consisted of ten questions (Question 1 to 10).

In response to Question 1, regarding the importance of the website for museums, all participants agreed completely with the suggestion that having a website is important for the museum. In response to Question 2, regarding reaching the audience through the museum website, all participants except one thought that they were reaching the audience through their website. On the other hand, only the manager of the website from the National Museum of Saudi Arabia believed that the museum website did not reach their audience.

In relation to Question 3, the researcher intended to ascertain the purpose for the selected museums using their websites and to what extent the staff understood this aim. All answers indicated that the website linked the museum with the audience in different ways: sharing content with them, reaching out to them, and providing them with knowledge, news or advertisements. It also clear from the responses that there was no standard answer to any particular question. For example, when the museum staff were asked about how often is the website updated, multiple response was noted from the same museum (quarterly from one participant and Weekly from another).

In relation to the types of content on the website, the participants mentioned using different types of content. All answers can be categorised into two main general areas: knowledge and information, and advertising. Knowledge includes posts about the museum's collections and the museum's history, etc. and the information such as opening hours, location and maps etc. Advertising could include any news and events related to the museum.

In relation to updating the website content and notifying users about the updates, the responses were very different. Participants N-1 and N-2 gave contrasting answers: quarterly updates for N-1 and weekly updates for N-2. N-3 and N-4 were very different from the rest of the staff at the National Museum of Saudi Arabia. Participants N-3 and N-4 said that they updated the website once or twice a month. Regarding Dar-Al-Madinah Museum, it seems that D-2 would be more likely to know about website updating and therefore his response was more specific. D-2 said that they update the website every two weeks whereas D-1 said they did this daily.

In relation to evaluating the effectiveness of the website, it is clear from the interviewees' responses that each of them has his/her own method for evaluating the effectiveness of the website. N-1 and N2 said that they evaluate it through the number of visitors through-the-door and N-4 said that they administer questionnaires to through-the-door visitors to the museum's events. In contrast, N-3 from the same museum said that they are not evaluating the website's effectiveness. On the other hand, D-1 and D-2 from Dar-Al-Madinah Museum said that they are evaluating the website's effectiveness through the number of website visitors and the level of online engagement (emails).

In relation to Questions 8, 9 and 10, which focus on who designed the website, the answers are very different. Firstly, regarding the designer of the website, the answers of all participants, except N-3, stated that a member of staff or someone related to a member of staff carried out the design. N-3, who is responsible for the website of the National Museum of Saudi Arabia, stated that she did not know who designed the website.

Secondly, regarding the question on the staff's opinions about the design, the answers ranged from viewing the design as being of low quality to good quality. Five out

of six participants (N-1, N-2, N-4, D-1, D-2) mentioned that the website needs further development, which means that they generally were not happy with the current website design. Finally, regarding the question about the research behind the design of the website, it seems that no real research was done before building the website. N-1 and N-2 mentioned that the IT department in SCTA usually ask staff about what they would like to have on the website before building it, and they would have done the same with this website. However, D-2 stated that they carried out simple and basic research about what they should include on the website before building it.

6.3.3 Social media usage

The third part of the interview questions was about social media usage. This section consisted of eleven questions (Question 11 to 21).

Social media is considered to be highly important to museums. In response to Question 11, regarding the importance of social media for museums, all participants entirely agreed with the suggestion that social media is important for museums.

Different points of view were given about the museum's social media audience. In response to Question 12 about the difference between the social media and website audiences, N-1, N-2, D-1 and D-2 argued that they are quite similar. In contrast, N-3 and N-4 said that they are not similar. N-4 added that more young people like social media than older people.

The staff of the National Museum did not answer most of the questions in the social media section, from Question 14 to 21, because their museum does not yet use social media. Their answers were related to their opinions and not to their experience of social media in the museum context.

The staff of Dar-Al-Madinah museum believe that they are reaching their audience through social media. This was confirmed by the responses to Question 13 about reaching the audience through social media tools, D-1 and D-2 from Dar-Al-Madinah museum said that they think they are doing well and engaging with their audience. N-1 and N-2 from the National Museum said that it is the trend now to use social media, and it is more for the 15–35 age groups.

Different points of view were given about the purpose of social media for museums. N-1, from the National Museum, would use social media to share the museum's events, news and information with the audience. However, D-1 and D-2 put forward different purposes for their museum using social media. D-1 answered that they would use it to advertise the website, while D-2 said they would use it to reach the largest possible audience.

Social media is considered as being used to post the museum's knowledge, information and news. This was the common answer for Question 15 about the type of social media content for museums. An exception was the response of N-1, who recommended the social media posts can be anything but simple, fast and flashing. Regarding Question 17, different points of view were given about the design features when developing content for social media. D-2 strongly believed that the content has to be the same through all social media platforms, whereas D-2 stuck with the idea that the content should reflect the museum's identity.

Different points of view were given about how often the museum should post on social media. D-2 said that they post daily, and D-1 said that they do so occasionally. The answers were different even though the participants are from the same museum. In response to Question 18, all participants stated that they are using or have agreed to use Twitter as it is currently one of the most popular platforms. N-1, D-1 and D-2 added Facebook and Instagram too. In addition, social media platforms are managed by the museum staff. In response to Question 19, regarding managing the social media platforms, all participants said that the social media platforms are managed by a member of museum staff.

Finally, all participants believe that the existing social media tools will change and some up-and-coming social media platforms will emerge. Furthermore, all participants stated that they evaluate the effectiveness of the museum's social media platforms and tools through likes, followers, retweets and engagements.

6.3.4 Marketing

The fourth part of the interview questions was about marketing. This section consisted of six questions (Question 22 to 27).

Printed advertisements are considered as the main traditional media currently used by museums. Three out of four participants from the National Museum mentioned that they rarely use TV and radio advertisements alongside printed advertisements. Dar-Al-Madinah Museum sometimes uses printed advertisements like brochures and newspapers.

All museums have used a marketing consultant. All participants mentioned that they have or gained help from a marketing consultant except for D-2. D-2 said that they do not have any marketing consultant.

Different points of view were given about the online marketing strategy. Three out of five participants said that they have an online marketing strategy (N-1, N-4 and D-1). D-2 mentioned that they do not have any online marketing strategy and no answer was given by N-2. N-1 and N-4 considered the museum's friends as an online marketing strategy for the National Museum, whereas D-1 considered having an e-shop as an online marketing strategy for Dar-Al-Madinah Museum.

Finally, in response to Questions 26 and 27, all participants said that they have an email contact database of visitors, whilst they do not have a regular electronic newsletter.

6.4 Interviews with the museum staff in the United Kingdom

The interviews with the museum staff in the UK were conducted in March and May 2015. The interview with staff from the Birmingham Museum and Art Gallery was conducted in March while the interview with staff from the National Space Centre was in May. The duration of the interview was just over 40 minutes for the Birmingham Museum and the interview was conducted through email in case of the National Space Centre. Detailed information about the rationale for selecting the museums is available in Chapter Three (section 3.10).

6.4.1 Demographics and background details

The demographics and background details of the museum staff who participated in this research are presented in Table 6-2 below. One is a member of staff from the Birmingham Museum and Art Gallery and the second is from the National Space Centre.

Table 6-2 The demographics and background details of the museum staff in the UK

Museum	Birmingham Museum and Art Gallery	National Space Centre
Participant code	B	S
Gender	Female	Female
Nationality	British	N/A
Position	Digital Development Manager And responsible for the museum website and social media	Marketing administrator

6.4.2 Web usage

The second part of the interview questions with museum staff in the UK was about web usage. This section consisted of ten questions (Question 1 to 10).

Websites are very important for museums. In response to Question 1, regarding the importance of the website for museums, both participants agreed completely with the statement that the website is important for museums. In response to Question 2, regarding reaching the audience through the museum website, one participant (B) thought that they were reaching the audience through their website (without using any particular reason for this answer), whereas no answer was given by the second participant (S).

In relation to Question 3, the researcher aimed to ascertain the purpose of the selected museums using a website and to what extent the staff understood its purpose in the museum. Regarding the aim of the website of the museums, both answers indicated that they have a clear aim. Both museums want to attract potential visitors, whereas interviewee S emphasised re-engaging previous visitors and interviewee B added raising awareness.

In relation to the type of content on the website, just one participant answered that the content was all about the museum's eight sites, and raising money from the tea room and venue hire. She added that they do not have any guidelines for the content. At the same time, all participants clarified that they update their website very regularly, daily or at least a couple of times a week. Participant B added that the new website is now updated daily and this has increased the number of museum's visitors.

Social media seems to be the main channel for notifying users about any updates on the website. Both participant B and S use social media tools to post advertisements on the website. Regarding the evaluation of the effectiveness of the museum websites,

the researcher obtained just one answer. Birmingham Museum usually use Google Analytics to evaluate the effectiveness of their museum website.

Each museum website has been designed through a specialist web design company. Birmingham Museum designed their website through a web design company, while the National Space Centre designed their website through an in-house design company. Therefore, both participants are confident about their website design and answered 'yes' to Question 9 which asks "Do you think your website has an appropriate design?". Finally, only participant B mentioned that there was research behind the design of their website. No answer was given by participant S about this.

6.4.3 Social media usage

The third part of the interview questions was about social media usage. This section consisted of eleven questions (Question 11 to 21).

Social media is considered highly important by Birmingham Museum. In response to Question 11, participant B from Birmingham Museum entirely agreed with the suggestion that social media is important for museums. Regarding Question 12, she thought that the social media and website audiences are exactly the same and that they are reaching their audiences. In regards to Question 14, she added that the aim of using social media is to "push the museum out", to find out what is going on and to be part of this wide network. On the other hand, no answer was given from participant S for Questions 11–14.

Both museums post relevant content through their social media platforms. Birmingham Museum is quite open and posts any content as long as it is fairly relevant, whereas the National Space Centre post website updates, special event news and space facts. Participant B also added that they are generally posting information to keep users engaged in science and space as well as the visitor centre. In addition, Birmingham Museum is focusing on maintaining a friendly style and the use of images as a design feature of their social media posts, whereas no answer was given to this question by the National Space Centre.

Twitter, Facebook and Pinterest platforms are used by both museums. In relation to Questions 18 and 19, both museums are using Twitter, Facebook and Pinterest

platforms, whereas Birmingham Museum is also using YouTube as it reaches the highest audience and helps them to reach out and share their videos. Participant B added that they are using Facebook because it has the highest number of fans and Twitter because it is now the most popular platform, where everyone talks to each other. Similarly, participant S from the National Space Centre mentioned that they found these social media platforms to have a large number of users and they have a lot of interaction with the public on those platforms. At the same time, they have a dedicated social media manager to manage the museum's social media. In contrast, Birmingham Museum does not have anyone dedicated to managing the museum's social media. For special occasions they give a password to someone to post on their platforms.

Finally, Birmingham Museum can clearly see the effect of social media on through-the-door visitors. From her responses to Questions 20 and 21, it is evident that participant B believes that there are some social media platforms that are going out of use and some which are up-and-coming. She also can see the effect of social media and this is resulting in changes to the website. She said: "We can see more people come to activities".

6.4.4 Marketing

The fourth part of the interview questions was about marketing. This section consisted of six questions (Questions 22 to 27).

Printed advertisements are considered the main traditional media that Birmingham Museum is using now. Participant B answered Question 22 by saying that they are using posters, flags, brochures and newspaper advertisements, whereas no answer was given by participant S to this question. At the same time, she mentioned that the National Space Centre has an in-house web designer and they also use freelance online marketing consultants. However, Birmingham Museum does not have a web design, social media or online marketing consultant.

Finally, Birmingham Museum does not have an online marketing strategy, and no answer was given by participant S regarding this. On the other hand, both museums have an email contact database of visitors and both museums publish a regular electronic online newsletter.

6.5 Interviews with online marketing experts in the United Kingdom

Face-to-face interviews with online marketing experts in the UK were conducted in April and May 2015. The interviewees were an online marketing and web presence expert and an online marketing and branding expert. The interviewees were asked to talk about their practice in their organisations and to share their expertise on the subject. The duration of the interview was over an hour with the first participant, and about 30 minutes with the second participant. Detailed information about the rationale for selecting the participants is available in Chapter Three section 3.10.

6.5.1 Demographics and background details

The demographics and background details of the online marketing experts are presented in Table 6-3 below. One is a member of marketing staff at De Montfort University and the second was a branding and online marketing manager of an international glasses company.

Table 6-3 The demographics and background details of the online marketing experts in the UK

Expertise	Online marketing and web presence	Online marketing and branding
Participant code	M	P
Gender	Male	Female
Nationality	British	British
Position	Online-marketing and web presence administrator at De Montfort University	Former branding and online marketing Manager

6.5.2 Web usage

The second part of the interview questions was about the web usage of the museum. This section consisted of ten questions (Question 1 to 10).

In response to Question 1, regarding the importance of the website to their organisation, all participants agreed completely with the suggestion that the website is important for them. In response to Question 2, regarding reaching the museum audience through the website, both organisations are completely aware of who their audience is. Both participants said that they are reaching their audience through their website and they know this through the audience response and engagement.

Furthermore, participant M added that the website alone is not enough to reach the audience now, stating that “You should draw people in through channels”.

In relation to Question 3, the researcher aimed to ascertain the purpose of using the website for both organisations and to what extent the staff understood this purpose. Both participants provided very specific answers. Interviewee M mentioned that the website has many functions as there are many stakeholders involved. One of their main objectives is to book somebody on an open day. Interviewee P mentioned that the main purpose for them is to build the lifestyle of the brand, the look and the image.

In relation to the types of content on the website, both organisations have built their content according to their website’s main purpose and according to interaction with their audience. Participant M answered that the content should depend on who the organisation are looking to attract. He added that at the university there are study areas, course pages, research pages, news and events, and information to show studies who they are. He also added “we are always making sure that we are providing what they want” which they know through external marketing agent. As the website purpose was different for the second organisation, participant P said that the most important content areas for their website are the provided gallery and the brand videos.

The aim of the website plays a big role in how often the website content is updated as mentioned in section 2.5.2.1. In relation to Question 5 and 6 on updating the website content and notifying users about these updates, participant M said this occurs on a “daily basis”, while participant P said it occurs with every new design collection. Both participants mentioned that they usually use social media to notify users about updates to the website. In relation to the evaluation of the effectiveness of the website, both participants said that they mainly use Google Analytics for this purpose. Participant M also added that they usually ask some of their audience about this, using a survey, and sometimes use third-party marketing agencies. Participant P also added that they record people giving their opinions too.

Web designing agencies have built both websites, as mentioned by both participants. Participant M said that the agency built their website according to their brand guidelines, whereas participant P said that the agency built their website from the

story of the brand that they have created. Both participants believe that their websites have or will have an appropriate design.

6.5.3 Social media usage

The third part of the interview questions was about social media usage. This section consisted of eleven questions (Questions 11 to 21).

Social media is considered as highly important by both experts. In response to Question 11, both participants agreed that social media is important. In addition, participant M added that social media is a very different channel as what happens in social media is engagement. It is very quick and does not last long. And it is a great way to reach and engage with people from different demographics. Regarding Question 12, about the social media audiences, participant P believed that the social media audience consists of largely the same people as the website audience and that they are reaching their targeted audience. In contrast, participant M mentioned that social media is less formal than the website. He did not know for sure, but he said that the current students participate more on their social media. Therefore, he thinks that their social media are reaching younger segments of their audience.

Regarding Questions 14 and 15, about the main purpose or aim of the social media and the main types of content they post, participant M said that the main purpose of the social media for them is public relations and communication with their current students, and also partners and industries. Therefore, they post events, news and opportunities on their social media platforms. Participant P said that the main purposes of social media for them are building the brand awareness and the brand credibility. Therefore, they post images and daily activities. Both M and P are looking to attract potential new customers.

Both organisations have their own style when posting on social media. Regarding Questions 15 and 16, about the design features they consider when they develop content for social media and how often they post on their social media, participant M said that they mainly focused on posting pictures and videos to get more shares. He added that these do not have to be very sharp, compared to the content website, as social media is about the message and not the appearance. On the other hand, participant P said that they have created design guidelines for reference by anybody

from the company who wants to post something – the post needs to be in a certain style and have a certain look. At the same time they both mentioned that they post on their social media platforms on a daily basis.

Many social media platforms have been used by both organisations. In relation to Questions 18 and 19, the interviews showed that both museums are using many platforms such as Twitter, Facebook, YouTube, Google Plus, Pinterest and LinkedIn. Participant P added two more tools: Snap Vine and Primo. Participant P stated that the organisation has chosen these tools according to the objectives for each tool, while participant M stated that the organisation chose the tools depending on their success in the market. At the same time, they both mentioned that these social media accounts are managed by a team.

Finally, both participants believe that the existing social media tools will change and some up-and-coming social media platforms will emerge. Participant M said: "There is always going to be a point where you are saturated. There will be something coming up". At the same time, both were in agreement that activity and engagement is more important than the number of followers or likes when evaluating social media platforms for effectiveness.

6.5.4 Marketing

The fourth part of the interview questions was about marketing. This section consisted of six questions (Questions 22 to 27).

Printed advertisements are considered the main type of traditional media, as mentioned by both participants. Participant M added that there would be materials going out when they promote an event. They use bus stop advertising, cinema advertising, and paper advertisements. He added that at the moment they have stopped doing newsletter advertisements; instead, they send emails to targeted audiences. Regarding Question 24 and 25, about the online marketing strategy, both organisations have an online marketing strategy. Participant M said that they have a campaign cycle for the whole year, whereas participant P said that they just have an overall strategy.

Finally, both organisations have an email contact database. Participant P mentioned that they send a regular two-page electronic newsletter to users on their email contact database every two weeks. On the other hand, participant M mentioned

that they have a Customer Relationship Management system, which is known as the CRM system. All the contacts are segmented to different groups. They do not send regular electronic newsletters to everyone. Instead, they send emails just to targeted people, as mentioned above.

6.6 Chapter analysis and discussion

These primary research interviews were required as the researcher has to identify what is behind the design of the existing web presence of museums in Saudi Arabia and the UK, and to gain information from another two online marketing experts from two different organisations in the UK. This is in order to develop a theoretical framework for the design of the web presence and associated online marketing strategy of museums in Saudi Arabia.

This discussion considered the findings from the literature review on the lack of web engagement between museums and audiences in Saudi Arabia, despite the fact that the country is considered as having one of the fastest growing internet infrastructures and web presence traffic in the region, and a fast growing number of web and social media users.

This discussion also considered the higher level of web usage by museums and organisations in the UK, which was shown in detail in the literature review in Chapter Two. It has also taken into account the primary findings from the observational case studies conducted in Chapter Four and the primary survey in Chapter Five of this thesis. This discussion might be useful for the development of the framework. The full discussion of the entire research finding will take place in chapter nine.

6.6.1 The web usage

Despite the answers given to Question 2 in section one of the interview questions about the museums' usage of the internet, five out of the six participants from museums in Saudi Arabia perceived that they are reaching their audience. However, Figure 5–4 in Chapter Five showed that the vast majority (over 95%) of museum visitors in the KSA did not hear about the museum through the website. This finding was also stressed in the literature review. According to Hamed and Higgett (2014), museums in

the KSA are still using the old traditional methods to deliver information and promote the museum to their audience. ALHotan (2014) also asserted this view by saying that one of the major challenges for people who run museums in the KSA is the lack of knowledge of how to reach their audience. Moreover, only a few KSA museums use web and social media. Museums in Saudi Arabia are still far away from using the internet to promote themselves effectively (Hamed 2015).

In relation to the museums' purpose for using a website and the extent to which the staff understood this aim, all of the answers indicate that the website linked the museum with the audience for different purposes: to reach them, to share information with them and give them knowledge, news or advertisements. It also clear that the answers are different from each participant, even within the same museum. From the answers of all the participants, especially N-1, N-2, D-1 and D-2, who were the owner and managers consequently, it seems to be more likely that both museums do not fully understand the main purpose of the website or have not yet set a clear aim and objectives for their usage of the website or online marketing. However, all the previously mentioned answers suffer from some serious limitations. It might have been much more relevant and useful if they had considered that the website be used as a digital marketing tool for museums; it works in parallel with traditional marketing methods (Gu 2012). Gu (2012) also added that it is more about extending the experience of visitors with the digital culture of the twenty-first century.

On the other hand, participants from both museums in the UK gave much clearer answers in regard to the purpose of their websites. The websites of both museums are considered as digital marketing tools for them to encourage and re-engage people to visit the museums. A major criticism of the website only functioning to drive traffic to the museum, made by Gu (2012), is that it is more about extending the experience of visitors with a twenty-first-century museum. He added that it should help to connect and extend their experience in a cycle, which should apply in both KSA and UK.

In addition, the participants form both organisations in the UK also gave clear answers in regards to the purpose of their website. They have shown a high level of understanding of the situation. Participant M said that the website has many functions

as there are many stakeholders involved, while participant P said that they want to build the lifestyle of the brand.

The main limitations of the website content areas in KSA, however, are in terms of having clear goals and a targeted audience. Museum audiences consist of a wide range of people, as noted by participant B. Therefore, it might be the case that they do not have any guidelines on content. However, participant M mentioned that this depends on who they are looking for. Every specific audience has its own targeted content. The online creative company Great River Creative (2014) in their report on museum websites also agreed with this argument. They believe that every piece of content has to be personalised for every specific targeted audience.

In relation to the frequency in which the website content is updated, the responses from museums in the KSA were very different, ranging from daily (D-1) to quarterly (N-1) updates. The observational case studies for both museums found that the National Museum updates its website between one and two times per month. Dar-Al-Madinah Museum updates its website nearly two times a month. Comparing the responses with findings from the observational case study (Chapter Four, sections 4.4.1 and 4.5.1) showed that N-3 and N-4 from the National Museum and D-2 from Dar-Al-Madinah Museum are closer to the primary findings of the web usage in chapter four (see section 4.7.1).

On the other hand, both museums in the UK update their websites frequently. This was affirmed by the observation study in Chapter Four. It found that the Birmingham Museum and Art Gallery used to update their website once a month, which is lower than KSA, and the National Space Centre used to update their website approximately three times a week, which is higher than KSA. Participant M also mentioned that they update their website on a daily basis. These figures have partly matched the research observation. Participants N3 and N4 from KSA National Museum and D2 from Dar Al-Madinah Museum were closer to the primary findings from the research observation.

In regards to evaluating museum websites for effectiveness, the number of through-the-door visitors and the number of website visitors seem to be the main evaluation methods for assessing the effectiveness of the museum website. This could

refer to their opinion rather than evidence based, for example, the answer given by N-3 who said that they are not evaluating their website's effectiveness. This research emphasises the answer given by participant N-3 because of the fact that both KSA museums do not use Google Analytics, as mentioned in Chapter Eight. However, Google Analytics is the main website analytic tool used by museums and organisations in the UK. Participant M added that they are also using surveys and third-party marketing agencies as well. Fletcher and Lee (2012) are convinced that these marketing goals have to be able to measure a lower level, such as in terms of visitors and purchases.

In regards to the design of the website and the research behind it, most interview answers response to questions number 8,9 and 10 mentioned that the design is done by a member of staff, with the participants not being sure if there is any clear evidence base for these designs. Comparing the responses with the findings from the observational case study (Chapter Four, sections 4.4.1 and 4.5.1) it was found that both museum websites did not support the standards for most web design elements for museums in both countries, such as being mobile friendly (see sections mentioned above). This is also clear from the fact that they do not have a clear aim or objective on which to base the design of the website in KSA. In contrast, Birmingham Museum studied other museum websites for good design and also the company which designed their website also took good design research from other museum websites (as participant B mentioned). On the other hand, participants M and P have built their websites differently. They started from "the interior side, branding and the company and the brand story".

6.6.2 Social media usage

Moving on to social media, all participants from the KSA and the UK were in total agreement that social media is very important for museums. This completely supports the findings of Ellis (2003), Vogel (2008), Kaufman (2009), Solnik (2009), Fletcher and Lee (2012), and Gu (2012). They added that it is important for museums to take advantage of the relationship creation feature of Web 2.0 and social media with the existing audience, and to develop new audiences.

All participants from the KSA and the UK, apart from participant M, also agreed that social media audiences are largely the same people as the website audience. Participant M added that he does not know for sure, but the current students participate more on social media. Social media reaches certain segments of their audience, he added. This has been emphasised by Askool (2013) regarding KSA statistics and by the Pew Research Center (2014) for worldwide statistics, as shown in Figures 2–7 and 2–8 in Chapter Two.

Similarly, regarding evaluating the effectiveness of social media, all participants from the KSA and the UK are using their users' engagement, likes and followers to evaluate the effectiveness of social media platforms. However, participant M added that evaluating effectiveness should depend on what you want to do, and on what your objectives are. The most recent arguments mentioned in the literature review in Chapter Two, such as Al Robai (2011), Aggad (2012) and Cvijikj et al.(2012), affirmed in their studies that the methodologies used to evaluate the effectiveness of social media platforms depends on the objective for using each platform.

It seems that Facebook, Twitter and YouTube are the most popular social media platforms across the study. This finding supports what was mentioned in the literature review of this study. By doing a simple comparison between Figure 2–12 and Figure 2–13, it is clear that YouTube, Facebook and Twitter have been the most popular social media platforms over the last few years. Moreover, as mentioned in section 2.3.4, McCann and McCulloch (2012) and Berthon et al. (2012) added that a museum has to customise the appearance of social media tools and aspects of their goals to meet the strategic plan, as there is not a standardised approach or a "one-size-fits-all" approach. This has also been stressed by the primary research interviews. All participants from the KSA and the UK believed that there is always going to be a point where the market is saturated; there will always be something else coming up.

Regarding the type of post and the posting frequency, all museums are posting relevant content through their social media platforms but some of them are quite strict about posting directly related content and others are less strict and post any content as long as it is "fairly" relevant (according to participant B) relevant such as Birmingham Museum. Regarding the frequency, they were varied. Most of participants mentioned

that they are posting on social media on daily basis without giving an exact number of posts. The interview data matches the observation data except participant D-2 who was posting an average 0.74 posts per day, which is slightly less than one post per day. Birmingham museum was the highest number of posts on Twitter (about 22 tweets per week) and National Space Centre was the highest on Facebook (about 9 posts per week), considering the fact that, the frequency of posting on Twitter is higher the frequency of posting on Facebook for all observed museums. And KSA museum has the lowest frequency of posting on both Facebook (post per week) and Twitter (about 5 tweets per week).

6.6.3 Marketing

Online marketing seems to be more advanced in practice in the UK. Museums in the KSA are using some printed advertisements such as in newspapers and brochures. On the other hand, organisations in the UK are combining smoothly online marketing and traditional printed advertisements. Participant M summarised this by saying that to promote an event, there would be average of advertising materials going out such as the website, posting on social media platforms and printed advertisements. However, the literature (section 2.5.1) in this study emphasised the argument that it is important to combine online marketing and traditional marketing, as traditional marketing channels are still active and notable in marketing communication. Both traditional and electronic marketing should be used together synergistically to bring the best results (Nekatibeb, 2012).

Knowing how to deal with online marketing tools is also essential for success. None of the museums in the KSA have a web design, social media or online marketing consultant. At the same time, the National Space Centre in the UK has an in-house social media manager and they also have freelances as online marketing consultants. Moreover, none of the museums (in both KSA and UK) have a strategy planned for their online marketing. On the other hand, both organisations in the UK have online marketing strategies. This involves in all aspects of online marketing, such as website design, email marketing, content marketing, branding and how these tools work altogether to gain the best results possible (Quelch and Klein, 1996; Broadhead and Carrol, 2001; Pett, 2011; The Internet Marketing Academy, 2011). The observational

case studies in Chapter Four illustrated that UK museums have set goals, targeted their audience and provided information on how they improved their online presence to meet the strategy.

Regarding the email contact database and electronic newsletter, all participants from the KSA and the UK have an email contact database of visitors. But simply having one without doing anything will not gain the best results. Both UK museums and organisations have, in one form or another, a regular electronic newsletter. Finally, all these tools work altogether to gain the best results possible, as the straightforward use of one tool does not ensure the achievement of goals (The Internet Marketing Academy, 2011).

6.7 Chapter conclusion

In this chapter the researcher set out to interview museum staff in Saudi Arabia and the UK, and online marketing experts in the UK. These interviews aimed to investigate the core issues surrounding the identification of strategies used by Saudi museums to design a web presence, and to identify the design of web strategies used by UK museums in the UK to engage effectively with visitors and increase their numbers.

Semi-structured interviews were used to determine current Internet and social media usage by the selected museums. The interview questions were in four parts: the participant's demographic information, the museum websites, the museum's social media, and marketing (both traditional and electronic). There were 28 questions, excluding those concerned with demography.

There were four participants from the first Saudi museum and two from the second, one participant from each of two museums in the UK, and two online marketing experts. All findings from these primary interviews were analysed and discussed by combining the parts in order to holistically understand what activities related to their websites, social media and marketing they are carrying out. This discussion compared the findings from the literature review on the web-based engagement between museums and their audiences with those from these primary interviews.

Table 6-4 illustrate the general comparison between the primary data from the observation and the interviews amongst museums in KSA and UK. It is clear that there

are slight differences between the information provided through the interviews and the observations. However, all figures shows that UK museum are doing more online activities than the museums in KSA except for the updating frequency of the website of Birmingham museum (old website) which was less than the museums in KSA. It is important to notice that the type of single data, namely interview and observations, were similar amongst all museums in KSA and UK. The implications of the above , for the museums in KSA, is that better engagement with social media and web needs to established in order to enable better outcomes similar to UK museums.

Table 6-4 Comparison of interview data with the observation data

	National Museum	Dar Al-Madinah Museum	Birmingham Museum	National Space Centre
The web site				
Content areas	About the museum	About the museum	About the museum	N/A
Updatining frequency	1 or 2 a month	2 amonth	Couple times a week	Very regularly, sometimes daily
Social media				
content areas	N/A	About the museum	As long as it is kind of relevant	Updates to the website, special event news
Updatining frequency	N/A	Daily	No definite number of times	At least daily
Data from the observation (The web site)				
Updatining frequency	1.45/month	1.9/month	1 / month	11.1/ month
Data from the observation (Facebook)				
Post frequency	N/A	4.5 / month	15.9 / month	39 / month
Data from the observation (Twitter)				
Post frequency	N/A	22.2 / month	94.2 / month	54 / month

The above table shows similarity between interview data and actual observed data, this indicates a general awareness of the staff with regards to the above parameters. The different interviews that were conducted in this chapter will influence the developing the framework from several interwoven values. The successful examples of the web presence's of the museums in the UK were the main influence. They helped in defining the need for a clear understanding of their web presence's vision and mission, goals and objectives and producing an online marketing strategic plan, as confirmed from the interviews with the UK museums staff . These can be used to aid the development of the framework as described in the next chapter.

CHAPTER SEVEN

DEVELOPMENT OF THE THEORETICAL FRAMEWORK

7 DEVELOPMENT OF THE THEORETICAL FRAMEWORK

7.1 Introduction

The main focus of this research is on developing a theoretical framework for the web presence design and an associated online marketing strategy for museums in Saudi Arabia. This chapter follows on from Chapters Two and Three and the primary findings presented in Chapters Four, Five and Six. Chapter Two provided the literature background to this research area. Chapter Three discussed the methodology adopted in this research and established the methodological framework as a process guideline for this study. Chapters Four, Five and Six presented the primary data and analysis of the findings.

In this chapter, the implications of the main findings of this research are discussed in sections that are easy to follow in order to organise and link the findings and to avoid duplication.

7.2 Framework development process

There are three main factors supporting the development of the proposed framework of this study: existing related models, literature findings and primary findings. The researcher has integrated these three main factors, as shown in Figure 7-1, in order to develop the proposed framework. To achieve the research objectives, the researcher employed several processes to derive the framework (Nalzaro at Allu, 2014).

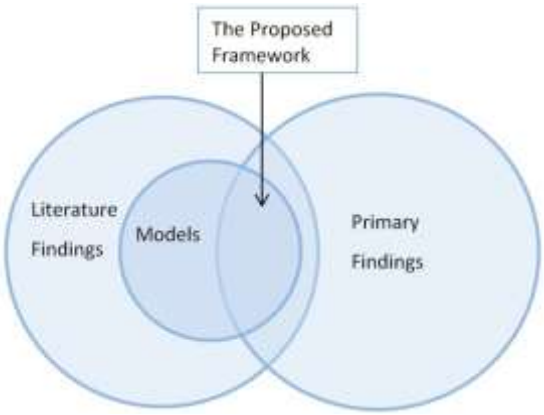


Figure 7-1 Development of the proposed framework

In order to create the proposed framework, the process was developed according to the procedure map presented in Figure 7-2. This procedure map allowed the researcher to take advantage of other models in the field and to implement the major findings from the literature and the primary findings in a logical order. The procedure map was divided into six stages, starting with selecting relevant models. In the second stage, the selected models were analysed, followed by the third stage which involved applying the findings from the literature and the primary data to the model. In the fourth stage, the framework was formalised to give it a practical form. The fifth stage constituted testing the framework, which is discussed in Chapter Nine.

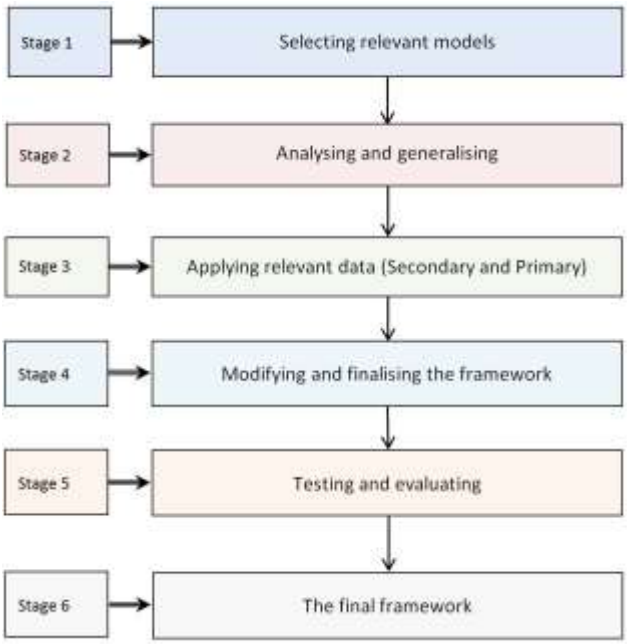


Figure 7-2 The framework procedure map

7.2.1 Stage one: Selecting relevant models

In order to develop the proposed framework of this study, literature on this area of research was analysed to select the most common and related models, as discussed in detail in Chapter Two. These frameworks are: the ASP model, SOSTAC model, McDonald's four-phase model and the RACE framework.

A: ASP model

Section 2.6.3 discussed in detail the literature on the ASP marketing process model. The ASP marketing process model consists of three phases: Marketing Analysis,

Marketing Strategy and Marketing Programmes (Guffey & Almonte 2012; Doole & Lowe 2008), as shown in Figure 7-3.

Figure 7-3 The ASP model
(Source: Guffey and Almonte, 2012, adapted by the researcher)

B: SOSTAC model

The literature (in particular: (Doole & Lowe 2008; Bhandari 2012; Smith & Chaffey 2013) shows that the SOSTAC framework is used to develop e-marketing plans. It is clear from Figure 7-4 that the SOSTAC model relies on six main elements: Situation analysis, Objectives, Strategy, Tactics, Actions, and Control, as discussed in detail in section 2.6.4.

Figure 7-4 SOSTAC model
(Source: Smith and Chaffey, 2013, adapted by the researcher)

C: McDonald's strategic marketing planning model

Figure 7-5 shows McDonald's strategic marketing planning model, which contains four main steps: Goal setting, Situation review, Formulating strategy and Resource allocation and monitoring (McDonald 2008). The details of all the steps of the model were discussed in detail in Chapter Two, section 2.6.5.

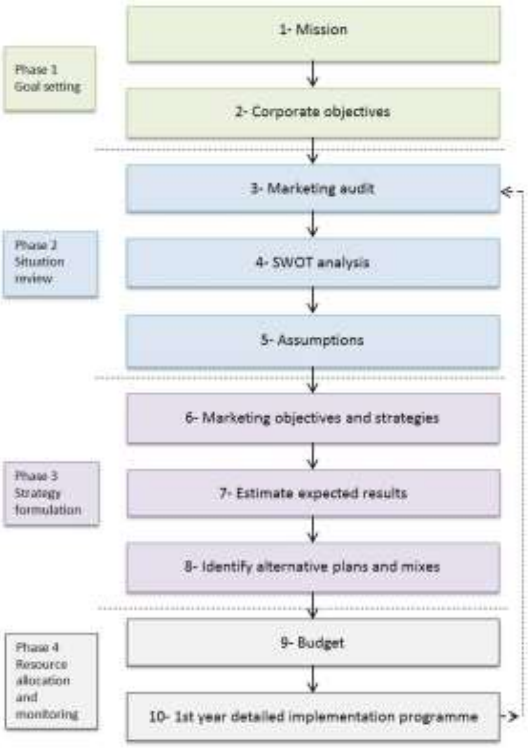


Figure 7-5 McDonald's strategic model
(Source: McDonald, 2008, adapted by the researcher)

D: The RACE framework

The RACE (or PRACE) digital marketing framework focuses more on social media channels and it also contains four phases: Plan, Reach, Act, Convert and Engage, as shown in Figure 7-6 (Smith & Chaffey 2013). Further details are provided in section 2.6.6.

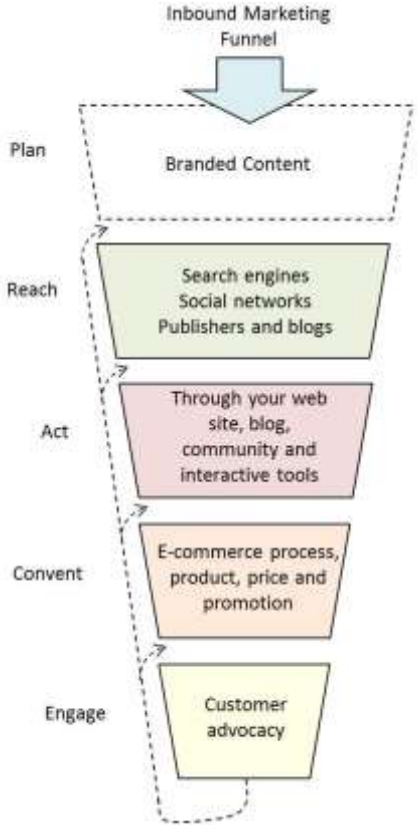


Figure 7-6 The RACE planning framework
(Source: Chaffey, 2014, adapted by the researcher)

7.2.2 Stage two: Analysing and generalising

Although these models use different terms to describe the stages and elements within their models in different ways, as discussed in detail in Chapter Two, there are significant similarities in their approaches. Each model places more emphasis on certain elements than others. The ASP model and the SOSTAC model start with analysing the current situation, whereas McDonald's framework starts with goal setting and then goes on to a situation analysis review. The next stage in McDonald's framework focuses on strategy, similar to ASP and SOSTAC, while this is the first step in the RACE model. The order in which this stage is implemented varies between all of the models. McDonald starts with a goal-setting phase in his model, as mentioned above. The RACE model instead starts with formulating a general plan and does not mention anything directly about goals or developing objectives. Almost all of the models end with implementation and marketing action stages. The final stage in the SOSTAC model is monitoring and control while other models do not focus on these factors; see Table 7-1.

As is clear from Table 7-1, the RACE model contains five elements but it focuses only on strategy and marketing actions. Similarly, all the other models focus more on some elements more than others. There is a slight difference in the order of the steps in the different models. McDonald's framework started with reviewing the mission and developing objectives first, whereas the SOSTAC model, ASP model and McDonald's framework start to map out the future approach before formulating an enforcement plan. The RACE model describes marketing tactics in more detail. Overall, there is little difference between these models apart from the varying order of the steps, with all models omitting monitoring and control except for the SOSTAC model.

By listing the different elements of these models in one table, as in Table 7-1, the researcher has examined and analysed them. The proposed model integrates the advantages and avoids the disadvantages and weaknesses of each model. The proposed framework combines all the elements that these models offer, in addition to adding elements from the findings from the literature and the primary study, as mentioned in section 7.2.

Table 7-1 Comparison between the analysed models/framweworks

Models/Frameworks		ASP	SOSTAC	McDonald	RACE	Proposed framework
Planning	Goals setting			✓		✓
	Situation analysis	✓	✓	✓		✓
	Objectives		✓			✓
	Tools				✓	✓
	Strategy	✓	✓	✓	✓	✓
Promotion Tactics / Actions		✓	✓	✓	✓	✓
Monitoring		✓	✓			✓

(Source: Author's work)

By synthesising all the models together horizontally, the common elements can be shown vertically at the bottom, as shown in Figure 7-7. The outcome of synthesising all of the models shows that all the impotant elements in the models can be included together.

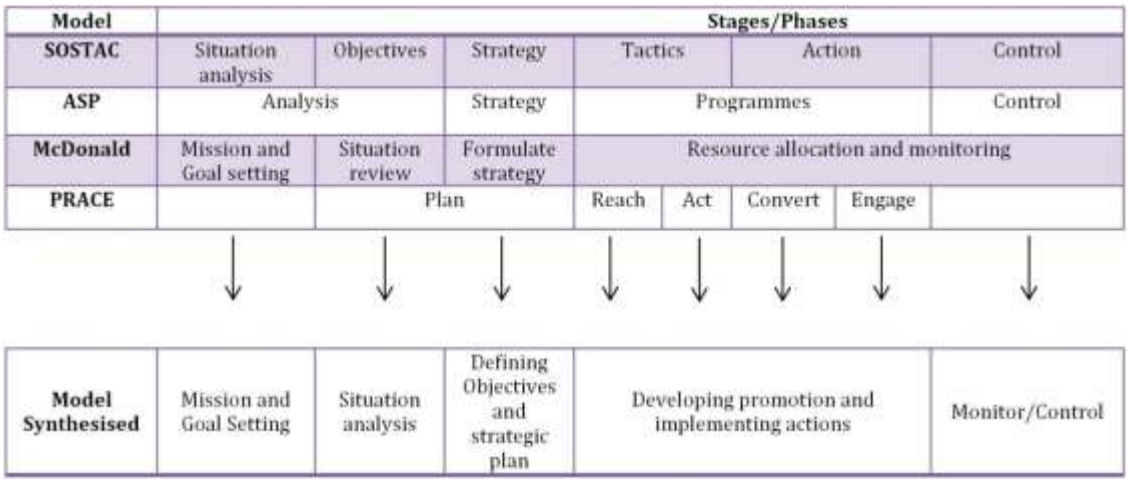


Figure 7-7 Model synthesis
(Source: Author's work)

Figure 7-7 includes similar elements which can be classified into the same categories. For example, mission and goal setting, situation analysis, objectives and strategy all could be classified and generalised under strategy, as discussed in detail in Chapter Two, section 2.5.2.7 (Dodson et al. 2013; Porter 1996; Nickols 2012). Classified and generalised elements into main synthesised phases.

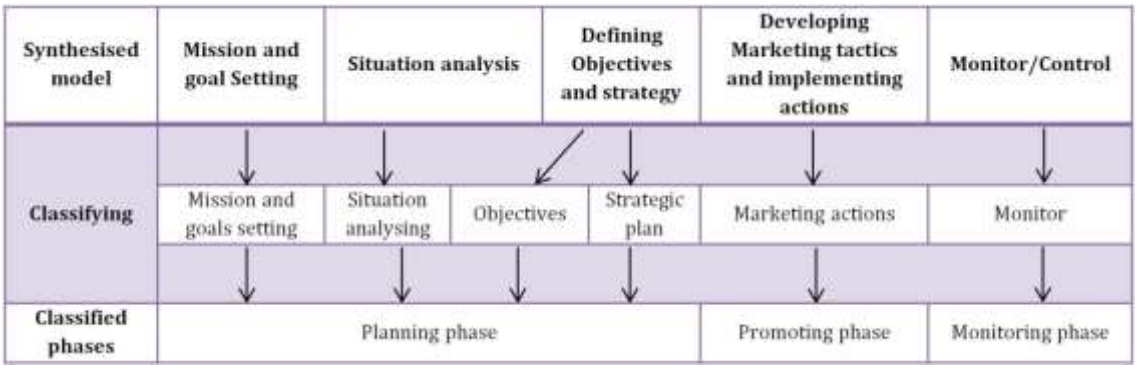


Figure 7-8 Model classification and generalisation
(Source: Author's work)

Figure 7-8 shows the final outcome of the stage two from the framework procedure map (see figure 7-2). Classifying and generalising all elements in Figure 7-8 above results in three main phases: Planning, Promoting and Monitoring. The next stage, three, involves applying the relevant elements from the secondary and primary data.

7.2.3 Stage three: Application of the relevant elements from secondary and primary data

The three main phases summarised and classified from the models in the previous section are: Planning, Promoting and Monitoring. This section will analyse

those three phases of the proposed framework in more details and will apply the related elements from the secondary and primary findings into the framework if required. Table 7-2 below illustrates the order of application of relevant data from secondary and primary data into the proposed framework.

Table 7-2 Application of relevant data from secondary and primary data into the proposed framework

Section number	details
7.2.3.1	Application of the relevant elements from secondary and primary data into Planning phase (phase 1).
7.2.3.2	Application of the relevant elements from secondary and primary data into Promoting phase (phase 2).
7.2.3.3	Application of a new phase from secondary and primary data into the proposed framework (will be phase 3)
7.2.3.4	Application of the relevant elements from secondary and primary data into Monitoring phase
7.2.3.5	Application of a new element from secondary and primary data into the proposed framework

7.2.3.1 Application of relevant data from secondary and primary data into Planning phase

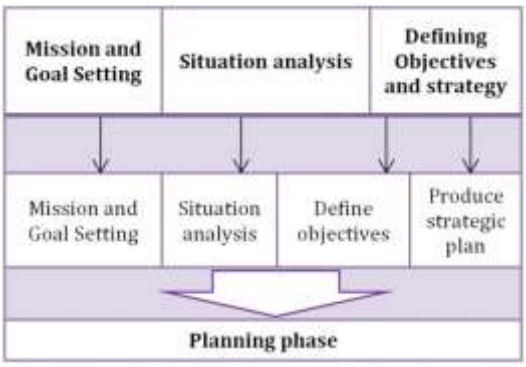


Figure 7-9 The four elements of the Strategy phase
(Source: Author's work)

From analysing and generalising the above Planning phase, it can be seen that this phase involves Mission and goal setting, Situation analysis, Objectives and Strategic plan, as seen in Figure 7-9. The primary study in sections 6.3.4 and 6.5.4 clarified the importance of identifying the long-term (strategies) and the short-term plans (tactics)

which was also mentioned in the literature in section 2.5.2.7, includes an examination of all essential long-term (strategies) and short-term plans (tactics) in the field of marketing. Online marketing strategy, the focus of this study, is the part of the marketing strategy related to the internet. It is involved in all aspects of online marketing such as website design, email marketing, content marketing, branding etc. The main, most important and essential part of online strategy making, which was summarised and classified in the previous section, will be discussed in detail within the following sub-sections (A, B ,C and D).

The Planning phase contains four elements shown in Figure 7-9: Mission and goal setting, Situation analysis, Objectives, and the Strategic plan. These elements are drawn from previous models, as mentioned in section 7.2.1. Each of these elements are considered as a stage in the Planning phase of the proposed framework.

A: Mission and goal setting

The primary interviews conducted in chapter 6 of this study confirmed that the most important and essential part of online strategy marketing is mission (and/or vision) setting, which were clearly understood from the museum staff and online marketing expert in the UK but not understood from the museum staff in KSA (see sections 6.7). This element has also been discussed in the literature of this study in section 2.5.2.7.

Therefore, the planning element here is about checking if there is a clear mission (and/or vision) for the museum or not; and if so, it needs to be developed and should be made clear. Having a clear mission and vision is the source of the strategic goals and objectives and then all other strategic activities. However, goal setting, as discussed in the literature in section 2.5.2.7, should come after situation analysis. Therefore, goal setting needs to be moved into the objectives stage after situation analysis, as seen in Figure 7-10.

B: Situation analysis

Museum situation analysis is the next stage after the vision and mission have been set and before setting goals and objectives. Museum situation analysis involves obtaining a deep understanding and analysis of the current situation of the museum. SWOT analysis (see Figure 2–23) is a good example of a situation analysis tool. Situation

analysis should consider; strength, weaknesses, opportunities and threats. In addition, SWOT analysis involves considering internal and external issues to draw up a good picture of the current situation:

- General information about the museum, including the museum speciality, collection, assets, category, size, direction … etc.
- Museum statistics, including through-the-door visitors, visitor demographics, website sessions, social media statistics … etc.
- Financial information and statistics.

As mentioned in Chapter Two, museum situation analysis is very important for building good and clear goals and objectives as well developing a strategic marketing plan. This analysis estimates where the museum is now, what they are doing, what is happening and helps to define the future goals and objectives. The analysis stage is carried out before setting or reviewing the museum objectives to make sure that the objectives are stated in the right way and specify how to achieve the museum's mission.

C: Define objectives

Goals and objectives have to be determined in order to achieve the mission. They have to be Specific, Measurable, Achievable, Realistic and Timely, or in other words, SMART, as mentioned in section 2.5.2.7. SMART objectives are Specific, Measurable, Attainable, Relevant and Time-bound. Within the interviews with online marketing expert in the UK, it was also noted that SMART objectives should be part of their strategies (see section 6.5.2).

D: Produce strategic plan

Strategic plan here means defining and clarifying the main path for the online marketing actions (long-term and short-term), including how the museum is going to achieve its objectives. The Strategic plan stage includes defining the main website features, search engine optimisation (SEO), choosing the right tools for social media, posting frequencies, assessing required employee training, and collaboration with a traditional marketing plan, as mentioned in detail in Chapter Two section 2.5.2.

Classified phase	Planning phase			
Stages	Define mission and vision	Situation analysus	Define Goals and objectives	Produce Strategic plan

Figure 7-10 The final four elements of the Planning phase

Figure 7-10 shows the final outcome of Planning phase. Application of relevant data from secondary and primary data into Planning phase in Figure 7-10 above results in four main elements: define mission and vision, situation analysis, define goals and objectives and produce strategic plan.

7.2.3.2 Application of the relevant elements from secondary and primary data into Promoting phase

Examining the literature has shown that museums survive through communication with people. In addition, in the age of the information revolution and the internet, the use of digital media has become a part of the culture, which is called the digital culture (see section 2.2.3). All the museums visitors, museums staff in the KSA and museums staff and online marketing experts questioned in the UK agreed to the importance of the online communication for museums (see sections 5.4.4, 6.3.2, 6.4.2 and 6.5.2). In addition, the success of digital marketing for museums depends on the content that this marketing delivers. The museum content could be delivered through the museum digital marketing channels such as; the museum's websites, social media and email marketing (see section 2.5.2.4). Therefore, online marketing communication for museums mainly functions to promote the museum collections, events and exhibitions etc. to push people to communicate and then increase, subsequently, their visits to the museum. As museums have rich content, the success of digital marketing for museums depends on the content that this action delivers. This is in keeping with the current practice of museums and online marketing experts in the UK in sections 6.4.2, 6.4.3, 6.5.2 and 6.5.3).

Promoting phase in the framework covers promotional activities. The previous models and frameworks have mentioned promotions and marketing actions in different ways: "Programmed" in the ASP and McDonald's model, "Tactics and Actions" in the

SOSTAC model and “Act and Engaging” in the RACE model. The ASP model attends to a marketing programme through direct sales aspects, whereas McDonald’s framework focuses on this through a one-year detailed implementation programme. The SOSTAC and RACE models attend to it from a digital marketing point of view.

“Action” in the SOSTAC model is about the planning activities required to implement the strategy. In the RACE framework, it is “Act”, which means interacting through the website and social media to generate leads. The following step in RACE is “Convert”. It is excluded from the proposed framework, because it relates more to direct sales. The next step is “Engage”, which involves building a long-term relationship with first-time buyers. These two steps are used in the proposed framework to interact with the audience through online channels and to engage with them.

As a result, museums first have to create content based on their main aims and objectives and make sure that this content is linked with the museum collection and developed to interact with their audience and provide them what they want (as mentioned in 6.5.2) to promote the museum through online channels. Every item of the collection, show or exhibit is a source of the content the audience would like to know about, as mentioned in detail in section 2.5.2.4. Consequently, the museum can promote their content over the website, social media and email marketing to drive people to engage with them through visiting and re-visiting the website or online profiles, and then for these users to be converted into through-the-door visitors. More online engagement means more through-the-door visitors, as confirmed by the primary observations (see section 4.8) ,interviews with the museums staff and online marketing experts questioned in the UK (see sections 6.4 and 6.5), and as mentioned in the literature section 2.3.8.

Consequently, the Promotion stage could consist of three main tasks: creating content, posting the content and, as a result, engaging with the audience. All these actions take place in the promotion phase, as shown in Figure 7-11.

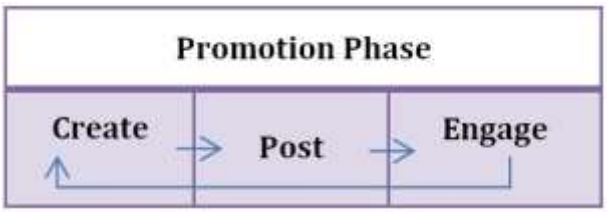


Figure 7-11 Main promotional actions

A: Create

In marketing, having more products means having more marketing (L. Gibbs 2013). Museum products include museum collections, exhibitions, events, news and the museum shop. Therefore, accordingly, for museums, having more collections means having more promotional activities. The first task of promotional actions for museums should involve developing the content about the museum or its products. Section 2.5.2.4 mentions in detail the most common objectives of marketing content.

B: Post

The second task in promotional actions involves distributing information about the content of the museum. The content can be advertised through all the different online marketing channels which should have been specified in the strategic tactics stage in planning phase. As mentioned in section 2.5.2.2 and section 2.5.2.7, each online tool or platform enables different kind of content depending on its functionality and targeted different age and gender groups. Another important issue is that each tools needs to be updated at different frequencies. The frequency of posting on the museum's social media should be more than frequency of posting on the museum's website. Each tool has its own associated methods, including timing, frequency of posting, engagement and management of the tool. This as mentioned previously in section 7.2.3.1, should be clarified in planning phase when applying the framework. This will be explained in detail in section 7.2.3.5.

C: Engage

The third task in promotional actions involves public engagement. After the message has been broadcast, the audience is expected to respond through different channels. Reacting appropriately to these responses is the first essential responses required to develop engagement between the museum and the audience. This online engagement perhaps, and most likely, will increase physical engagement and through-the-door visitors, as mentioned in detail in section 2.3.6. As mentioned in section B above, each online channel has its own engagement and management method. For example, a Facebook page has like, comment or share options in order to engage with

posts. Likewise Twitter has like, retweet, reply, mention, hashtag and more in order to engage with followers and audience. Online engagement is considered as a measurement tool of success in online marketing.

7.2.3.3 Application of a new phase from secondary and primary data into the proposed framework (adapting phase)

The effective distribution of the museum's marketing message requires choosing the most appropriate media channels, ensuring that they are fit for purpose, as mentioned in the planning phase . It is not only about choosing the right tool and platform; dealing with Web 1.0 is different from dealing with Web 2.0 (see Figure 2–1), and each online tool or platform has its own requirements and tactics. The website of the museum has to respond to the audience's needs regularly. All these factors have to be often considered and managed before posting the message/content during the Promotion phase in the proposed framework.

Consequently, an additional phase needs to be implemented between the planning phase and the promotion phase. This phase will involve the online channels that have been chosen in the strategic plan stage in planning phase. In this phase, the promotional material (the content) to be distributed will be managed and adapted. These online marketing channels will be the museum's web presence, which mainly includes the museum's website, social media and email marketing (more details are provided in section 2.3.4).

The main online marketing channels are the website, social media and email marketing, as mentioned in sections 2.3.3, 2.5.2, 5.4.4, 6.3, 6.4 and 6.4 which was a huge gap in KSA as it can be seen in figure 5-4 . These channels should be analysed, adapted, and tested, or created in they are not exist, before use, to make sure that they are suitable to deliver the message. These tools will be adapted through the use of the checklist and guidelines which have been discussed in detail in sections 2.5.2 and 4.2. Therefore, the need arises to add an additional phase to the framework related to the online channels; this phase is called the "Adapting" phase, as shown in Figure 7-12. Figure 7-13 shows the applied processes; the phase order has now been changed. The

promoting phase has become the third Phase and monitoring has become the fourth phase. In addition, the main online marketing channels have been added to the second phase (Adapting phase).

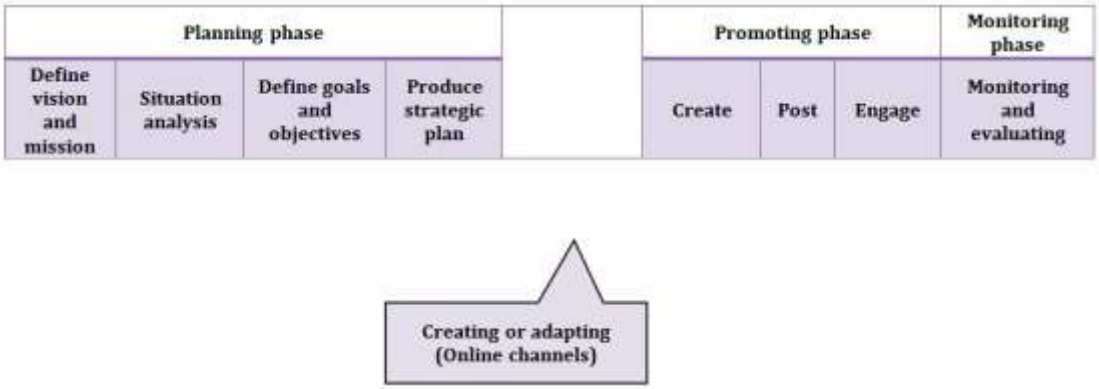


Figure 7-12 Where to apply the Adapting phase

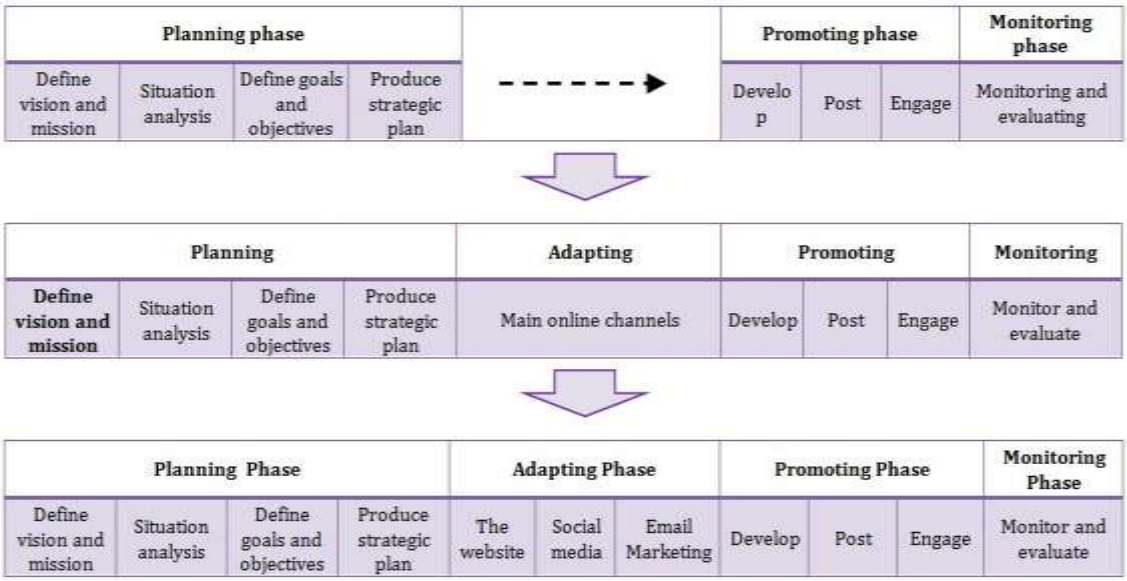


Figure 7-13 The process of applying the Adapting phase

7.2.3.4 Application of the relevant elements from secondary and primary data into Monitoring phase

As mentioned in section 2.6 in Chapter Two, ASP, SOSTAC and McDonald have mentioned monitoring in their models. The ASP model mentioned monitoring the programme when describing the programme section of the model, while this is mentioned clearly in the SOSTAC and McDonald models. The last section in the SOSTAC

and McDonald models is about measuring and monitoring the success of the programme.

As mentioned in section 2.5.2.7, monitoring and evaluating should be built around the framework as methods to measure the performance. Every aspect of the performance has to be monitored and measured, and this will help in reflecting upon the current strategy and developing future performance. It is more professional and a necessary activity to monitor and measure all stages of the framework.

Placing monitoring phase in the last stage of the proposed framework is not sufficient for monitoring and evaluating the entire performance of the framework. Therefore, every marketing action needs to be monitored and evaluated individually to make sure that the performance and the effectiveness of the framework are improving. This enables the weaknesses of the current actions to be highlighted, or if there are any shortcomings in the current actions, and will help to develop the future strategy. For this reason, the Monitoring phase has been broken down and introduced into all phases, as can be seen in Figure 7-14.

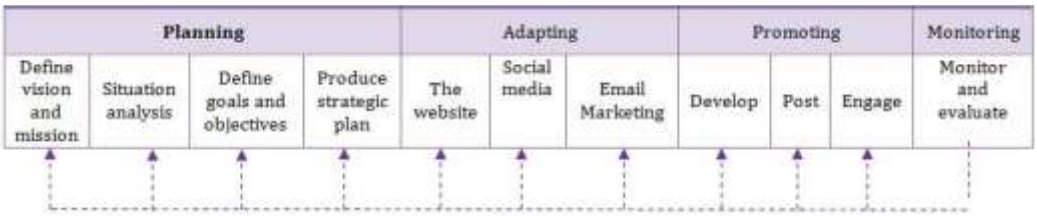


Figure 7-14 Introducing the Monitoring phase to the process

As a result, the Monitoring phase has been deleted and is instead incorporated into all other phases as seen in Figure 7-15. Taking these monitoring points into consideration will help to monitor and evaluate the performance of the whole framework, as mentioned in the Strategy section (section 2.5.2).

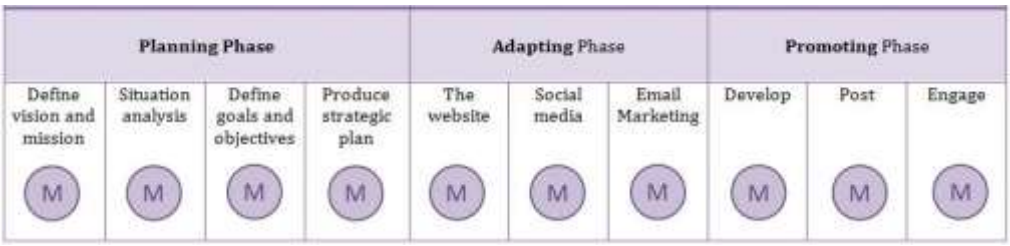


Figure 7-15 Incorporating monitoring points

7.2.3.5 Application of a new element from secondary and primary data into the proposed framework (Frequency)

The website update frequencies within the framework are very important issues to consider as confirmed in the primary observation of this study (see part C in sections 4.5.1 and 4.6.1, part B in sections 4.5.2 and 4.6.2 and part B in sections 4.5.3 and 4.6.3) and primary interviews with museums staff and online marketing experts questioned in the UK (see sections 6.4 and 6.5), which has also mentioned within the literature in sections 1, 2, 3, 6 and 7 in section 2.5.2.

Different sections in the framework needs different update frequencies or cycles. Table 7-3 shows the web presence updating cycle as recommended from the literature in Chapter Two section 2.5.2.7. Figure 7-16 shows the adapted frequency cycle used in the framework.

Table 7-3 The web presence frequency cycle

The webpresenc	Updating frequently/cycle
The website (minor) (SEO)	Weekly/monthly
The website (major) (SEO)	Biannually
Emailing	Fortnightly/monthly
Social media (post and engage)	Daily/weekly
Social media (tactics)	Monthly
Strategy plan	Quarterly

Planning Phase Quarterly / biannually cycle				Adapting Phase Weekly / monthly cycle			Promoting Phase Daily / weekly cycle		
Define vision and mission	Situation analysis	Define goals and objectives	Produce strategic plan	The website	Social media	Email Marketing	Create content	Post content	Engage with audience
M	M	M	M	M	M	M	M	M	M

Figure 7-16 Adapted frequency cycle

7.2.4 Stage four: Modifying the framework (reshaping)

Figure 7-17 shows the final outcome of the previous stages that have been modified and reshaped to make it easier to put them into action. The framework has been changed from a horizontal shape to a vertical shape. This enables the elements of the framework to be presented in the right order and makes it easy to understand and follow.

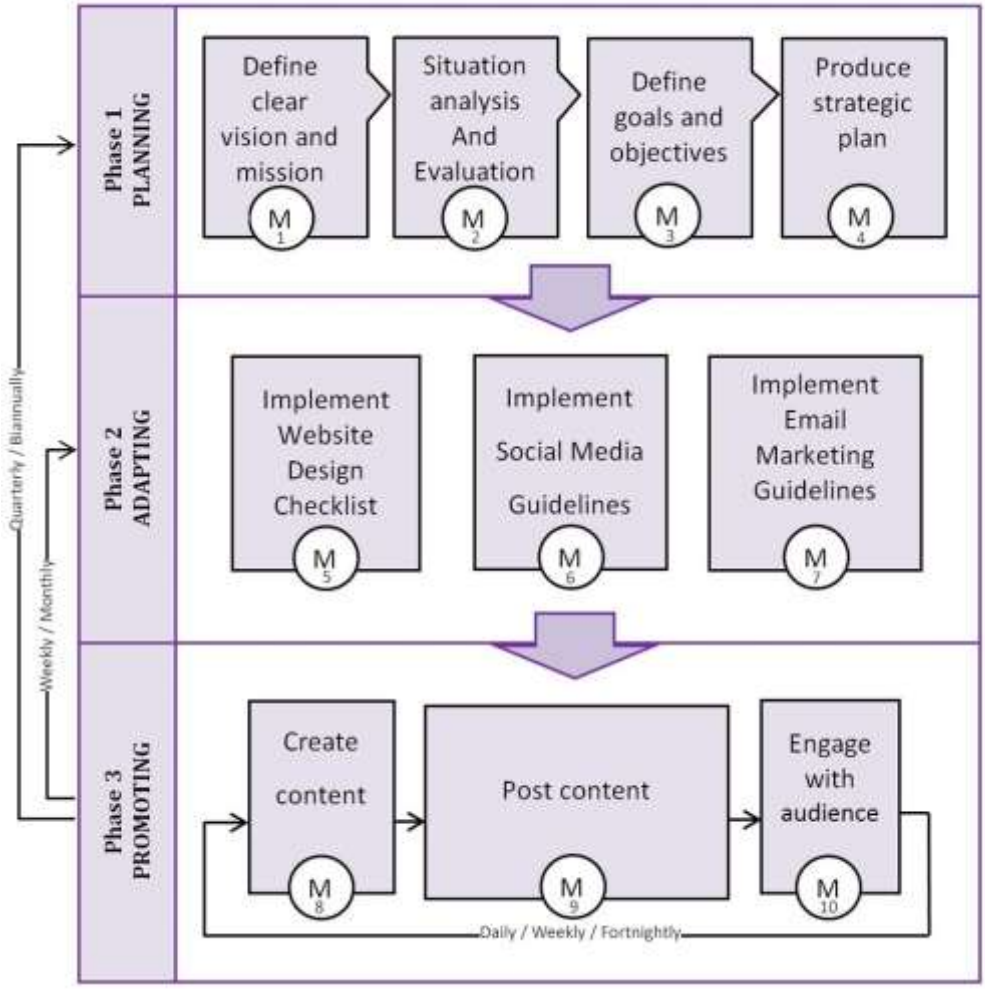


Figure 7-17 The final Framework

M1 to M10 refers to monitoring at each individual stage, please see Table 7-4.

7.3 The interpretation of the framework

The developed framework in Figure 7-17 consists of three main phases: Planning, Adapting and Promoting. This section will interpret these three phases and explain all of their elements in detail. Each phase is interpreted in a separate section and each element is explained in a sub-section.

7.3.1 Planning phase

The Planning phase contains four stages: Define clear vision and mission, Situation analysis and evaluation, Define goals and objectives and produce strategic plan. The Planning phase includes all elements related to the planning of all essential long-term and short-term activities. Online marketing planning is the main focus of this

phase, but it also considers the relation and integration with the traditional marketing strategy and plan as mentioned in 2.5.2.7. Strategy is a very wide topic and is related to many elements. Some of these elements may affect the marketing strategy directly and some perhaps indirectly.

The main elements are described as being direct, clear, apparent, and noticeable or tangible like the museum mission or vision, the current situation and goals and objectives. The framework considers each of these elements separately. Other elements like SEO, choosing the suitable social media platform and strategic plan are considered as indirect elements. These elements are produced under one stage called strategic plan.

A: Define vision and mission

Vision is the first stage in planning phase. It is the most important stage. The Vision stage is about where and how the museum wants to be. It is very important for the museum at this stage to have a clear statement of their vision and/or mission to guide them to help the organisation move towards their goals or objectives. These factors are considered as the foundation of the action plan. Also, it is very important that all members of staff understand and agree on these factors. The vision and mission have to be: understandable, attainable, realistic, focused and suitable for communication.

B: Situation analysis and evaluation

Situation analysis and evaluation is the second stage in planning phase. Current situation analysis is very important for developing goals and objectives and a strategic plan. Therefore, it is staged before specifying the future goals and objectives. It estimates where the organisation is now, what they are doing and what their competitors are doing and helps to define the future goals and objectives. There are many tools for applying situation analysis. SWOT analysis (Figure 2-25) is a well-known situation analysis model and focuses on internal and external issues. At this stage, the museum should analyse all of their current statistics and actions. This analysis includes examining online and physical statistics such as all statistics for the website, social media, the museum collections and visitors. It is very important for this first statistical

point to function as a control point to evaluate the future success of the framework performance and associated changes.

C: Define goals and objectives

Online strategic goals and objectives are an essential part of the online marketing strategy. The strategic goals and objectives are drawn up after examining and evaluating the current situation analysis in order to point to what the next stage should be in relation to moving towards the museum's vision and mission. Having a clear goal helps to build clear objectives. Goals and objectives have to be specific, clear, measurable and trackable. This framework recommends using the SMART model to make sure that the goals and objectives are stated in the right way.

D: Strategic plan

As mentioned in section 2.5.2.7 and in the introduction to this phase, the strategic plan will include elements such as:

- Branding consideration
- Content development procedure
- Website management and SEO
- Choosing suitable social media platforms
- Social media actions and tactics
- Update frequency for all tools
- The integration with and relation to traditional marketing
- Online public relations
- Staff training and awareness

7.3.2 Adapting Phase

The adapting phase contains three stages: Website checklist, Social media guidelines and Email marketing guidelines. The effective distribution of the museum's marketing message requires choosing the most appropriate online channels to ensure that they are fit for purpose, as mentioned in the strategy stage in Planning phase. Each chosen online tool or platform has its own requirements and tactics for use. The three

tasks within this phase will make sure that the delivery of the messages is proceeding in the appropriate way. Adapting phase requires a weekly or monthly cycle.

A: Implement website design checklist

It is recommended to use the website checklist (see section 4.2) to support the success of the website. The website checklist could be used to build a new museum website or for improving the existing one. A website design checklist will help the museum staff to ensure that their website is up to standard. Also, it will help them to post new content weekly or monthly on the museum's website. The checklist will be used to examine every single post and element on the website and check that nothing is going wrong or has been forgotten and encourage best design practice. Usually, the checklist focuses on different aspects of the website design and not the content. The content issues are considered within the strategy stage in planning phase.

B: Social media guidelines

It is very important for museums to have a social media policy and guidelines which have been built according to the policy. As there are many social media platforms and they come and go over time, there are no fixed guidelines or policies that can fit everything exactly. The museum could build their own social media guidelines and policy or get help from existing guidelines and policies and adjust them to fit their purpose. The guidelines will make sure that every single post on the social media platforms is perfect and that nothing is going wrong or has been forgotten.

C: Email marketing guidelines

Using email marketing will ensure that email marketing will have the best value; museums have to use email marketing guiding principles. Email marketing guidelines will make sure that the email campaign is following best practice, taking legal issues into consideration, and is measurable. The museum should build their email marketing guidelines and get help from existing guidelines to fit their strategy.

Email guidelines could include elements such as:

- Defining specific email audience, such as age group, gender etc..(see section 2.3.6)

- Email frequency and dates, such as once or twice a month. Weekly or less frequent emails are recommended (see section 2.5.2.7)
- Number of pages, considering that too little contact is not good for brand awareness; nor is too much contact as well as The time that they need to read through the emails should also be taken into consideration (see section 2.5.2.3)
- Main content sections, should be high-quality content considering the audience interests (see section 2.5.2.3)
- Design and technical issues
- Testing the email, as some items could be changed like colour, font and graphics due to different email reading systems.
- Measuring performance

7.3.3 Promoting phase

Promoting phase in the framework covers promoting frequencies. Online marketing for museums mainly aims to promote content about the museum collections, events and exhibitions through the main three channels (mentioned in Adapting phase). Museums have to first create content to promote it through online channels and then to engage with audience comments. Every item of the collection, show or exhibit is a source of the content audience would like to know about.

A: Create

As museums have rich content, the success of digital marketing for museums depends on the content that this marketing delivers. The museum should follow the strategy of creating the content, which they should mention in Planning phase of this framework. Different content (such as text, picture, video etc..) could be created and developed for each tool. Each chosen tool in the strategy section in Planning phase has its own strategy. The same content could be modified to be able to post it through different platforms. For example, for an event of new news, it could be posted in the website as a full length, Facebook (for instance) full length as well and Twitter short length (under 140 character).

B: Post

The second stage in Promoting Phase is about posting the content that has been created and/or developed in stage one. This content should be posted in accordance with the website checklist, the social media or email marketing guidelines. Each platform has its own short-term and long-term strategy as planed in stage 1. Some platforms need to be posted in few times daily, such as Twitter. Some others could be a couple of times a week such as Facebook (see sections 2.3.6 and 2.5.2.7).

C: Engage

The third stage in Promoting Phase promoting stage is engagement. After posting the messages, the audience are expected to respond through different channels. Reacting appropriately to these responses is the first essential point required to develop the engagement between the museum and the audience. These responses should follow the same guidelines as those for social media platforms and email marketing.

7.3.4 Monitoring

Monitoring was broken down and introduced to all phases and individual tasks, as can be seen in Figure 7-14 and Figure 7-15 in section 7.2.3.4. These monitoring points will help to monitor and evaluate each section in the whole framework performance. Each section has its own monitoring elements. Table 7-4 below presents all monitoring points and individual requirements:

7-4 Brief monitoring elements

Monitoring point numbers	Monitoring elements	Example
1	To measure that the whole framework activities are going towards the museum's vision and mission To ensure that the organization is following the direction established during strategic planning.	
2	Analysis of results of looking outside and Inside the museum (SOWT)	What is the improvement from the last analysis Door visitor, website sessions, new followers, likes,...ect
3	Monitor objectives, Responsibilities and Deadlines	How many/much of the objectives have achieved
4	To review the overall strategic plan and the smaller tasks. Monitoring and evaluating the planning activities and status of implementation of the short-term and long-term plans. Deviations and update the plan to reflect the current objectives/new objectives direction	the frequency cycle implementation for each tool
5	Continuing to monitor and evaluate the planning activities and the status of the implementation of the web design checklist	Posting frequency Posting policy
6	Continuing to monitor and evaluate the planning activities and the status of the implementation of the social media guideline/policy	Posting frequency Posting policy
7	Continuing to monitor and evaluate the planning activities and the status of the implementation of the email marketing guideline/policy	Posting frequency Posting policy
8	Continuing to monitor and evaluate the creation/development of the content for the website, social media and email marketing	How many content have created/ developed for each platform
9	Continuing to monitor and evaluate posting activities for the website, social media and email marketing	How many content have posted on teach platform
10	Continuing to monitor and evaluate engagement activities for the website, social media and email marketing	Haw many retweets, mention etc., for twitter

7.4 Chapter conclusion

This chapter has presented the development of the theoretical framework for the web presence design and an associated online marketing strategy for museums in Saudi Arabia. This chapter follows on from all the previous chapters and discussions. This chapter has presented information in sections that are easy to follow in order to organise and link the findings in order to develop the proposed framework and to avoid duplication. The researcher integrated the existing related models, literature findings and primary findings in order to develop the proposed framework. To fulfil this task, a logical six-stage procedure map was developed and followed step by step.

Understanding the research subject, what the current business practice models are, and what the academic models are was an essential issue for this study. Therefore, the most related business and academic models from the secondary research were chosen in the first stage. The straightforward use of these models does not, however, ensure the achievement of the research goals.

There were similarities and differences between all of the chosen models. The major differences between the models were that some models missed some elements such as monitoring and frequency, which were added into other models. Also, there is a slight difference in the order of steps in the different models. The second stage after selecting the relevant models is analysing and generalising. The research considered that each model has advantages and disadvantages. The proposed model integrates the advantages and avoids the disadvantages and weaknesses.

In the next stage, the researcher applied and adapted the outcome of stage two (Analysing and generalising). The researcher developed a new phase by applying the secondary and primary data. Also, a monitoring stage and the frequency cycle were adapted as well. Finally, the framework was modified from being in a horizontal shape to a vertical shape to present the framework elements in the right order and make it easy to understand and follow.

Testing and evaluating the framework is discussed in the following chapter.

CHEPTER EIGHT

TESTING AND EVALUATION

8 TESTING AND EVALUATION

8.1 Introduction

In the present chapter, the researcher will describe his testing and evaluation of the web presence's design framework of the web presence and associated online marketing strategy for museums in Saudi Arabia, as developed in Chapter 7, see figure 7-17. The test is intended to evaluate the effectiveness of the design framework and to validate the framework in terms of its effectiveness using a real world scenario. It was performed using the same museums that were the subject of the "in-depth observational case study". This was to ensure appropriate comparison could then take place, for example if different museums were used then selection bias may be an issue. (See museum selection method section in 3.8.1).

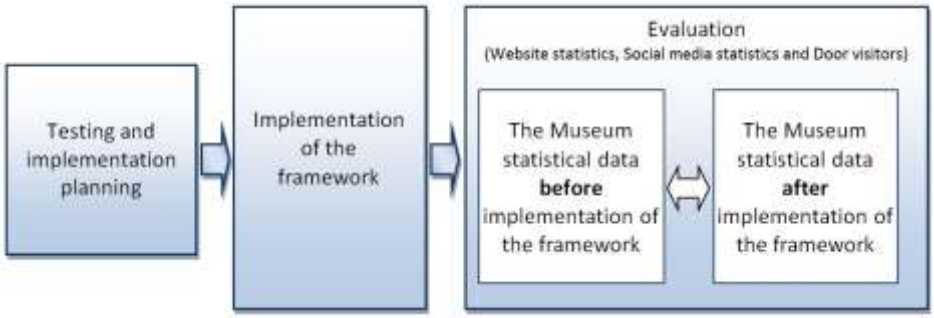
The specific research objective has been the main factor determining the method for testing and evaluating the framework and collecting valid and reliable data. This method was developed according to the objective "to assess the effectiveness of the designed multimedia-based framework for web presence and associated online marketing strategy for the museum in Saudi Arabia" as shown in figure 7-17.

The testing of the framework consisted of implementation of its three phases and examining its impact in terms of effectiveness:

1. Planning phase
2. Adapting phase
3. Marketing phase

These three phases above need to be examined in order to evaluate and assess the framework's effectiveness. These three phases are derived from the framework phases as shown in Figure 7-17 in Chapter 7. The evaluation and discussion section compares and analyses the statistical data before and after the framework was applied. This statistical analysis, using SPSS software, allows the researcher to discover any differences and thereby to determine if the framework has significantly improved the engagement between the Museum and its audience.

The testing and evaluation process can be summarised using the following diagram (see figure 8-1).



8-1 The testing and evaluation prossess

The figure above shows the different parameters that were measured pre and post framework implementation. This chapter will discuss each parameter in more detail.

The researcher applied the testing process in the same order as that of the framework's design. The researcher started applying the framework on 6th July 2015 and planned to finish by 23rd September 2015, a period of 110 days. Unforeseen problems caused this end date to be extended to the end of 6th February 2016. , adding 105 days to the duration to make the total duration of 215 days. The Promotion phase (actual marketing) started on 1/12/2015 to 6/2/2016.

Figure 8-2 below shows graphically, the time periods for data gathering pre and post framework implementation. The exclusion period takes into account the actual time during which the framework was in the process of being implemented, therefore this period of time was not evaluated. Due to limited data availability such as monthly Twitter analytical data, the researcher had to use a different time period for each parameters (Twitter, website and door visitor).

8-2 The time periods for data gathering pre and post framework implementation

Despite the fact that the active promotion phase by the researcher was for about 10 weeks, in order to use as much data as possible for the evaluation, the data gathering period was extended beyond the 10 weeks for Twitter and the museum's door visitor data (see section 8.3). The researcher tried to maximise the statistical data gathering periods in order to provide a reliable comparison.

8.2 Testing and implementation

8.2.1 Testing and implementation time plan

The researcher developed a plan by which to manage the testing and evaluation process of all aspects of the framework within the limited time available and to ensure the comprehensiveness of the research. The initial plan is shown in Table 8-1.

Table 8-1: The initial plan

Date	From 6 July - 26 July 2015	From 27 July - 22 August 2015	From 23 August - 23 September 2015
Plan	Planning phase	Adapting phase	Promoting phase
Stages	1. Check and confirm the vision and mission 2. In-depth situation analysis and evaluation 3. Check and confirm the goals and objectives 4. Check and confirm the strategic plan	1. Check and confirm the website design 2. Check and confirm the social media policy/guideline 3. Check and confirm the email marketing policy/guideline	Apply the promoting plan 1. Create and develop 2. Post 3. Engage

The table below, table 8-2, shows the difference between the planned and actual dates for implementation of the framework. It can be seen that the adaptation phase took much longer than expected; this was due to unforeseen circumstances such as delay with meeting management from the museum.

Table 8-2 The Actual dates

Phases	Planning phase	Adopting phase	Prompting phase
Dates of phase implementation	6/7/2015-26/7/2015	27/7/2015-22/8/2015	23/8/2015-23/9/2015
Planed number of days (to implement phases)	20	26	31
Actual dates of implementation	6/7/2015-31/7/2015	1/8/2015-29/11/2015	1/12/2015-6/2/2016
Actual duration (number of days)	25	120	67
The difference in	5	94	36

Each phase was accomplished by confirming that each individual section within each phase was completed in a systematic manner, phase by phase. More detail for each individual section is given below.

8.2.2 Planning phase implementation

As planned, the researcher began to implement the framework's first phase on 6th July 2015. All stages in this phase required interviews with the Museum staff in person. The researcher conducted five meetings with the Museum owner in this phase, the initial duration of which was 20 days. The number of changes needed (such as having a clear vision and SMART objectives, one example of this was developing an English language section within their website in a specified timeframe), however, the difficulties in arranging times with the Museum's owner and manager, necessitated extending this phase duration to 25 days.

8.2.2.1 Vision and mission

The researcher felt that the museum's vision and mission could be improved. The researcher asked the Museum owner and manager to rewrite its vision and mission. The museum owners and manager agreed to make some changes such as ensuring that the vision and mission of the museum were attainable and realistic.

8.2.2.2 Situation analysis

The next stage involved a comprehensive situation analysis of the museum's current circumstances, covering most of the relevant statistical issues. The museum's statistics including; door visitors, website and social media were measured to help the researcher evaluate progress as the framework was applied, and subsequently to help him evaluate the framework's performance. The data below will be used to compare pre and post the framework implementation as mentioned in Figure 8-1. The researcher has explained the individual statistical analysis below for the different parameters in section 8.3.

A: The website statistics

Figure 8-4 below shows the statistics for website sessions during the period between 30th April 2015 until 6th July 2015. According to Google analytics, a session is "a group of interactions that takes place on your website within a given time frame". The curve fluctuates unstably from the 30th April 2015 until the 6th July 2015 (97 days).

Figure 8-3: Sessions of Dar Al-Madinah's old website

(source: Google analytics)

Table 8-3 below shows that the website had a total of 1,523 sessions over the 67 days, with average of 21.75 sessions per day. Every user spent 11 seconds on average, viewing about one page. The website visitors were from different demographic background, in total four different browser languages were recorded. The vast majority of visitors were new, with only 0.02 percent being returnees, as shown in Figure 8-4. The low percentage of returnees may reflect on the poor website user experience. Figure 8-5 shows the distribution of the website visitors around the World by the number of sessions. It can clearly be seen that almost all the website traffic was from outside KSA.

Table 8-3 Dar Al-Madinah's old website statistics (As redorded on 5/7/2015)

Subject	Statistics
Total website sessions	1,523
Average website sessions per week	152.3
Average website sessions per day	21.75
Number of session's users	1,488
Total pages viewed	1,564
Average number of pages viewed per session	1.03
Average duration of sessions	00:00:11
Percentage of new sessions	97.64%
Percentage of new users	99.8 %
Percentage of returning users	0.02 %
User languages	4

Figure 8-4: Percentage of new and returning visitors
(source: Google analytics)

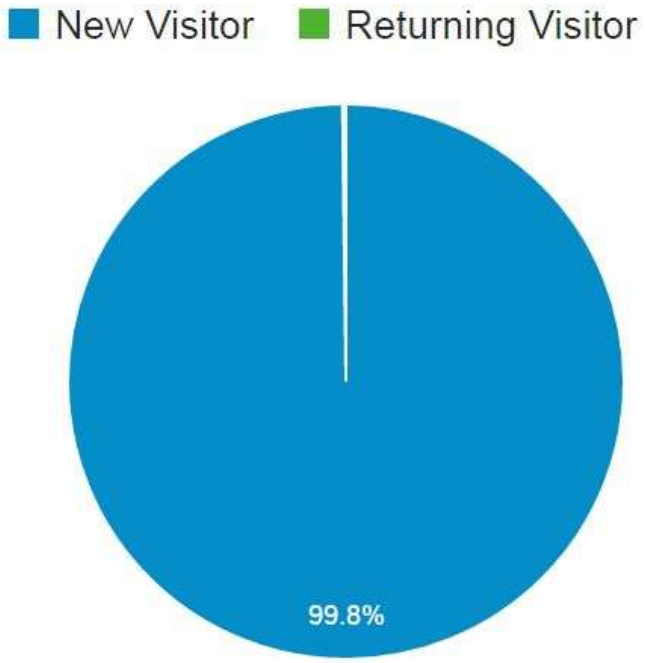
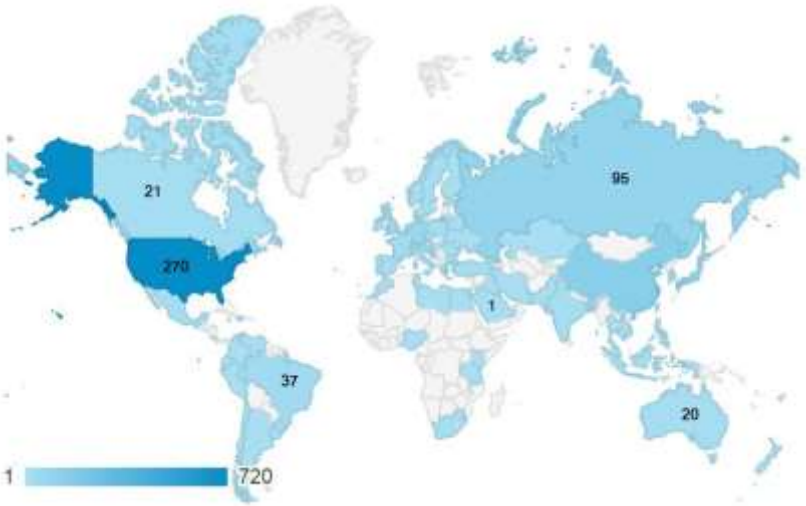


Figure 8-5: Examples of session locations (source: Google analytics)



B: Social media

The Museum uses Facebook, Twitter, YouTube and Instagram, the four most popular social media platforms. The manager handles Twitter, YouTube and Instagram, while another staff member oversees Facebook. The researcher was given complete authority over Twitter, which is the Museum's main social media focus. Facebook is not part of the Museum's marketing strategy, being run by the staff member as their

personal account. The researcher was denied access to Facebook and therefore, could not analyse any statistics nor use the Facebook tool for the museum promotion. In addition the researcher was also denied any cooperation to involve the museum's Facebook in this study (see limitations in section 9.6). Table 8-4 shows the main current statistics recorded on 6th July 2015.

Table 8-4: Museum's social media current statistics (As redorded on 5/7/2015)

Platform	Feature	Figure
Facebook	Total Likes	3,882
Twitter	Followers	5,311
	Average tweet per day	3.5
	Average tweet expression per month	140k
YouTube	Subsctibers	59
	Total Uploads	12
	views	2,248
Instagram	Followers	765
	Total posts	197
	Avrage likes per month	900+

The researcher was given full access to the Museum's Twitter account. This added value to the framework's testing and evaluation because Twitter is the most popular platform, making it the main social media tool used in applying the framework. Table 8-5 below shows Dar Al-Madinah Museum's Twitter statistics before applying the framework.

Table 8-5: Dar Al-Madinah Museum's Twitter statistics

Months	Tweets	Tweet impressions	Profile visits	Mentions	New Followers
February 2015	88	95,200	2,054	111	258
March 2015	79	135,000	5,687	129	378
April 2015	84	139,000	14,000	90	270
May 2015	85	118,000	12,900	65	273

The researcher will examine the post application of the framework Twitter statistics using the table above. This will make the numbers more meaningful as it is difficult to comment on social media in isolation.

With regards to e-newsletter, there is no comparison data due to the fact that the museum did not have any e-newsletters before. However the museum has a database of member's email and contact address. This could be used to generate regular email newsletter contact. The researcher will discuss this in detail in section 8.2.2.4.

C: The museum

Dar Al-Madinah Museum is one of five museums in the city of Al-Madinah, although only one of these could be considered a real competitor because of its similar focus. This competition is actually minimal, however, because they do not operate as competitors because Dar Al-Madinah Museum is much larger and more popular. The museum's general statistics are presented in Table 8-6.

Table 8-6: The Museum's general statistics

Subject	Statistics
Average visitor per day	48.6
The number of the museum's collection	Just under 2,000 display About 2,000 in store room
The number of the museum's staff	17
Museum's building land area	3,000 square meters
Occupied area	1,050 square meters

The average museum door visitor numbers were calculated from the last 30 Arabic weeks, from 24th November 2014 till 21th June 2015. Table 8-7 below presents the number of door visitor from this period.

Table 8-7 The number of door visitor from 31th Janewary 2014 till 21th June 2015

Week	Starting date	Number of visitor per week	Daily average
1	31/01/2015	394	65.7
2	07/02/2015	388	64.7
3	14/02/2015	358	59.7
4	21/02/2015	361	60.2
5	28/02/2015	408	68.0
6	07/03/2015	359	59.8
7	14/03/2015	406	67.7
8	21/03/2015	415	69.2
9	28/03/2015	332	55.3
10	04/04/2015	459	76.5
11	11/04/2015	392	65.3
12	18/04/2015	376	62.7
13	25/04/2015	421	70.2
14	02/05/2015	424	70.7
15	09/05/2015	412	68.7
16	16/05/2015	405	67.5
17	23/05/2015	381	63.5
18	31/05/2015	360	60.0
19	07/06/2015	423	70.5
20	14/06/2015	358	59.7

In addition to that, the museum exciting promotion method is, just, distributing some brochures in selected hotels and for the museum physical visitors.

8.2.2.3 Goals and objectives

The Museum's goals and objectives did not meet the framework's requirements as they were not SMART objectives (see section 2.5.2.7). The researcher held meetings with the Museum's owner and manager for the purpose of rewriting the Museum's goals and objectives to make them SMART. The researcher amended some of the objectives by giving them a clear time frame and gave them measurable parameters. Some examples of these, is in order to improve the number of visitors an objective was defined to hold an exhibition twice a year, the researcher also identified that an objective was needed to be defined to ensure there were appropriate staff to maintain the museum's web presence.

8.2.2.4 Strategic plan

The researcher discussed the details of the museum's strategic plan with the manager during this period. The strategic plan includes the museum's target audience, the website's SEO, social media platforms and their allied strategies, brand issuing and guidelines, online policies, short and long-term strategies including cycling plans, integrating the exciting promotion methods (which is brochures) with the implementation of the framework and staff training (See examples in table 8-8). The Museum manager pledged to make every effort to address these issues, and was helped in that endeavour by the researcher. The full strategic plan has not been presented here, due to the museum's desire to keep this information private.

Table 8-8 Examples of some elements of impelemented strategic plans

Strategic element	Features (example)
SEO	• Frequently updating the website with valuable and reliable content • Making the title tag clickable text that appears in search results • Include keyword in the title tag • Include keywords in meta description • Include the Keyword in the URL • Include keyword in image ALT tag • Link to other relevant pages on the site • Reference and link to authoritative resources • Write lengthy content • Minimise page loading time
Branding	• Logo standard identified • Slogan (wordmark) identified • Brand Story developed • Different logo looks identified • Key colours scheme identified • Additional colour palette options identified • Standard typographic fonts identified • Consistent style for images
Online policy	• The museum promotes authoritative and honest discourse with its readers. • Employees are allowed to associate themselves with the museum when posting • Content pertaining to sensitive museum information should not be shared online. • Proper copyright and reference laws should be observed by employees when posting online. • Dishonourable content such as racial, ethnic, sexual and religious • Employees are not allowed to disclose information that are financial, operational and legal in nature, as well as any information that pertains to the museum members.

Important parameters were identified from the Planning phase to improve the web presence of the museum. The strategic plan is used to define the other parameters within the framework such as frequency of posting cycle and email marketing.

The museum already had a social media presence which was Facebook, Twitter, YouTube and Instagram. The manager of the museum decided to focus on the most popular social media platforms in KSA (Facebook and Twitter).

As part of the strategic plan the researcher identified a complete lack of email newsletters. After discussions with the manager it was agreed that the museum would publish e-newsletters in both Arabic and English. The researcher, also, discussed the strategic plan for the e-newsletter including; content, number of pages and layout (See the first e-newsletter in appendix J).

The four areas of Planning phase was very important to help the researcher to provide the foundation for the framework implementation. In the section the researcher will describe the adaptation phase with reference to the three core areas of the museum web presence (the website, social media and e-marketing).

8.2.3 Adapting phase

The adaptation phase contains three stages: the website, social media and email marketing. Effective marketing of the Museum's message required selecting the online channels that are best fit for the purpose, as mentioned in the Strategy stage in planning phase. Each online tool or platform chosen had its own requirements and strategies for use. The three stages within this phase will ensure the appropriate delivery system for/and communication messages. The implementation of this phase was delayed for five days (see Table 8-1) because of the delay that had occurred in Planning phase. The duration of this phase was planned for 26 days, but in the event took just over four months, for several reasons:

- The website needed major changes
- The Museum did not have an in house website designer
- The designer of the Museum's website asked for more than the Museum had budgeted for this purpose
- The researcher had to help the Museum develop its website
- Developing the website required much communication with the Museum's manager
-

Initial quotes from web design company had identified that there was a lot of work that needed doing and a bigger budget then planned, therefore it was decided for the researcher to help the museum develop their website. This added a time delay to the initial testing and evaluation plan – refer to table 8-1.

8.2.3.1 The website's design

As mentioned in Section 7.3.2.A, a checklist helps support a website's success. The Museum's current website was extensively analysed in Section 4.5.1. Application of the checklist to the old website revealed the necessity for major changes such as:

- the need for mobile-friendliness
- the provision of multiple languages
- trendy design
- interactivity
- an effective structure
- The fulfilment of users' needs

The key design changes followed the best aspects of design practice as identified from the secondary and primary study (see sections from 2.5.2.1 to 2.5.2.7). Some of the key design elements for implementation included developing the website to be a mobile friendly site and adding a second language to the museums website. These two changes fulfilled the strategic plan identified in the planning phase described earlier.

The website design layout was also changed following best web design layout from analysis of most popular museums websites (see appendix D). Also the website was analysed using the website design element checklist (described earlier in section 4.2.1) to ensure that the developed website will be an effective structure and will fulfil user needs. Applying the website design element checklist on the museum's old website found that:

- The website is it not mobile friendly (through applying Google Mobile-Friendly Test) (see figure 8-6).
- The colour scheme not linked to the museum subject or collections.
- Old fashion design comparing with other museums in the UK.
- No museum gallery has included into the website
- No icons for the museum's main sections and departments
- The website was based on one language which is Arabic language.
- All social media links were not active
- All user needs were not considered such as interactive map, pricing and visiting plan.

The new website was developed through wix.com making sure to fulfil all previous comments on the old website. Figure 8-6 presents the mobile friendly test version of the old and the new website and Figure 8-7 contains screenshots of the old and new website, which was published on 1st December 2015 (will be mentioned in detail in section 8.2.4.1).

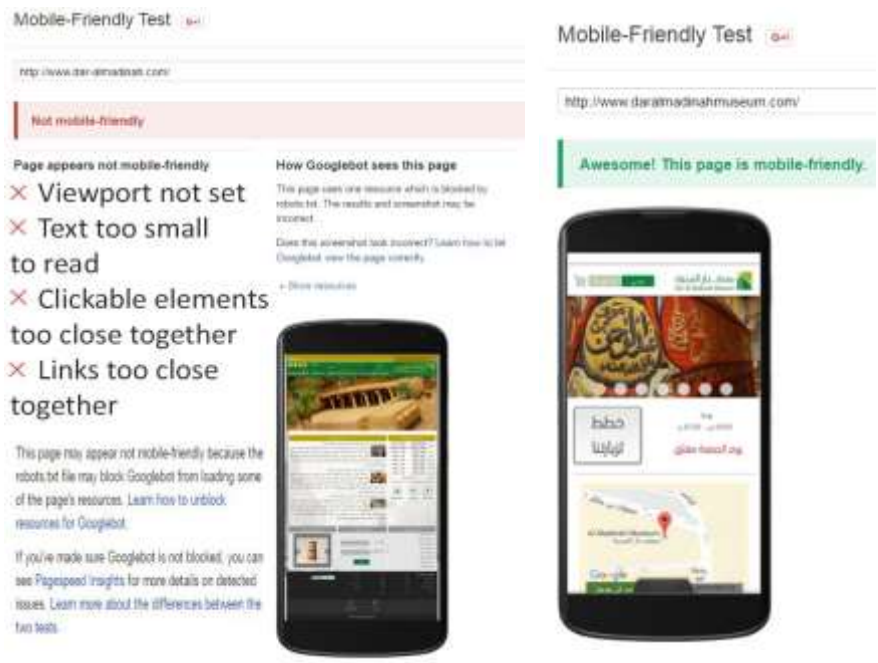
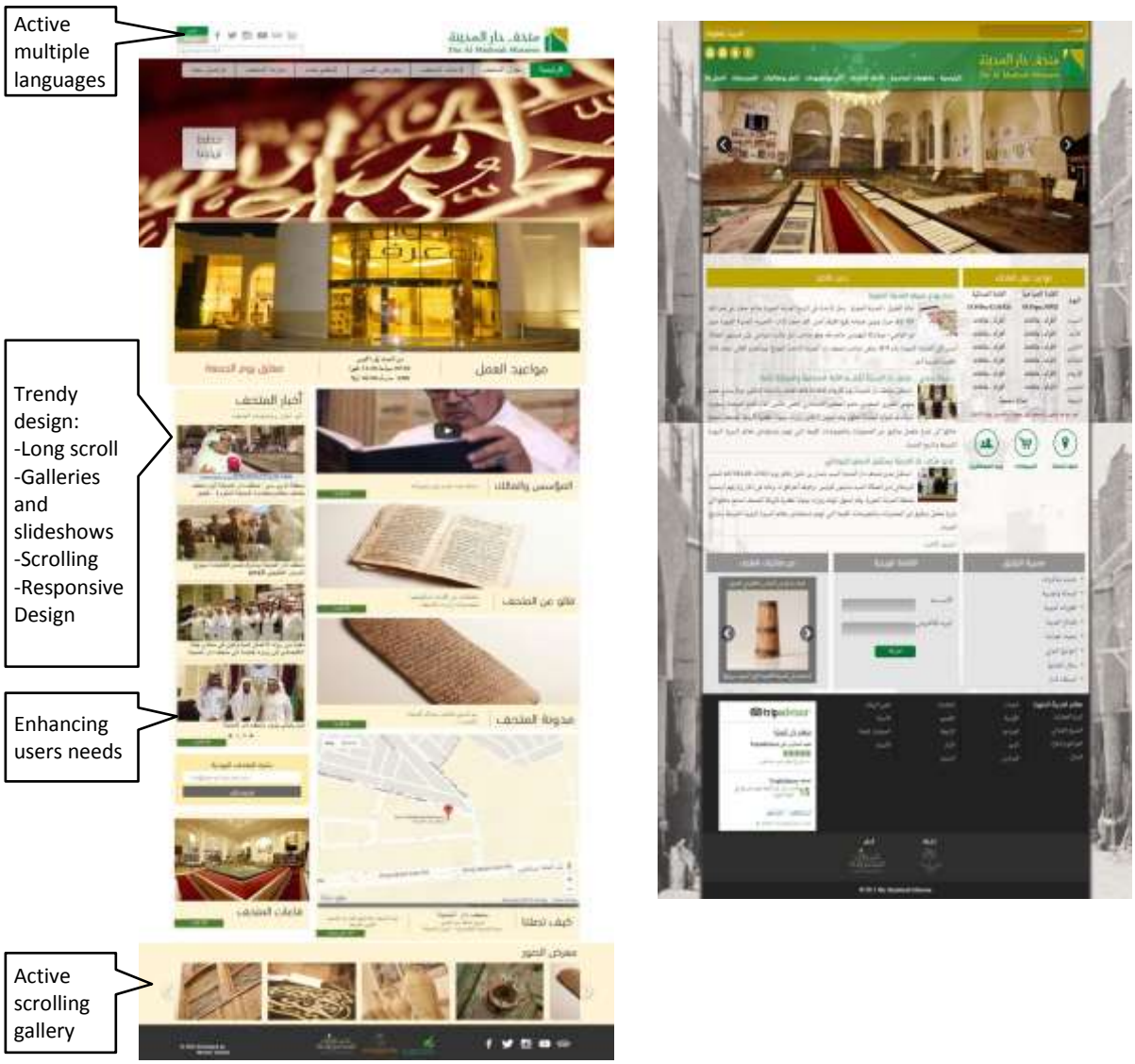


Figure 8-6 Mobile friendly test of the old (left) and the new museum website(right)



The new website

The Old website

Figure 8-7: Screenshots from Dar Al-Madinah Museum's new website

The above figure 8-6 shows the old website and the new website home page, which was designed by two focus groups and the researcher.

A focus group was used by the researcher as mentioned in section 3.11 to evaluate and explore potential key changes in developing the new website.

The researcher conducted two focus groups within this adaptive phase to ensure best practice in website development. The focus group consisted of seven design and marketing professionals in KSA, they included professionals from design school at Taibah University in Al-Madinah city.

The first focus group meeting analysed the old Dar Al-Madinah museum's website and the second focus group meeting was after developing the new improved website, taking into the consideration the comments that have given in the first meeting.

The aim of the first focus group was to find and to support the outcome of applying the checklist on the design of the museum existing website. It was also important to hear the professional opinion and feedback on the museum`s existing website in order to make meaningful changes and avoid researcher bias. The researcher had already some background information to help with the focus group from his secondary and primary data such as the proof-of-checklist developed in chapter four to develop the museum is current website. The following were key design comments from the focus group;

- The website domain name was felt to be vague. It was suggested to change the domain name to make it relevant to the museum. The original name was Dar-almadinah.com. This was suggested to be changed to daralmadinah*museum*.com. It is important for users to be aware of the subject within a domain name if the brand is not well known globally such as this museum, see sections 2.2.4 and 4.2.1.B.
- The original website was not mobile friendly. This was suggested to be a key addition to this phase.
- The website was only in Arabic, it was suggested to add English language to the website. This is important as English language is a global language and to make the website appeal to a global audience.
- The design layout was felt to be outdated. The focus group suggested to use a simple design with brighter colour scheme, better use of spaces and expand more white space.
- It was suggested to make the new website more interactive such as adding feedback forms, live social media feed and a membership option.

The second focus group was with the same participants from the first focus group meeting. The aim of the second focus group was to evaluate the development of

the new website with regards to the changes applied to it. The second focus group were in agreement with the new developed website and suggested no further changes.

8.2.3.2 Social media

It is very important for museums to have social media policies and to construct guidelines according to those policies. In this stage, Dar Al-Madinah Museum developed its own social media policy and guidelines for its social media platforms.

The social media policy was developed by the museum directly and did not require the input from the researcher. As previously mentioned in strategic plan in section 8.2.2.4, the social media platforms which formed the focus of this study were already in place (Twitter and Facebook).

It was identified during this process that there were no clear policy or guideline for managing social media platform for the museum. The researcher identified the following key points;

- No clear frequency of posting/updates was noted. It was advised to define a set time period of social media postings for each platform.
- The contents of the social media was not clear and at times not relevant to the museum subject, this was identified and discussed with the manager. A plan was agreed to ensure relevant content was posted in a timely manner.
- Better museum engagement was encouraged. It was noted that at times, the museum would be reluctant to engage with social media such as retweeting, replying and adding likes/mentions (see tables 4-13 and 4.17). The researcher agreed with the museum that a set time would be used every day for updating and reviewing the social media.

This section also concerns management of the short-term social media strategies developed in the framework's planning phase.

8.2.3.3 Email marketing

The researcher identified no email newsletters were being used by the museum. The researcher agreed with management to implement an email marketing guidelines which lead to the development of monthly e-newsletter in both Arabic and English.

The email newsletter guidelines ensured compliance of the email campaign with the Museum's goal and objectives. The monthly email newsletter template was also constructed at this stage. There were two email newsletters in two languages, Arabic and English.

Some of the key examples of email marketing guidelines included the following;

- Identifying the frequency of emailing newsletter: this was set at monthly interval, as this is the ideal frequency for the museum to have a balance between not sending contents too often but enough so that audience remains engaged.
- By reviewing content of the e-newsletter: this should include museum's news, upcoming events, popular posts from social media and multimedia of museum collection.
- The number of pages should be limited to 2-3 pages as not to overload the reader.

8.2.4 Promoting phase

The framework's Promotion phase concerns those daily promoting activities involved in disseminating the Museum's marketing messages. Promotion followed the strategies outlined in the Planning phase. All content was created using the museum's collection or directly related subjects, after which it was posted on the online marketing channels (the website, social media and email newsletter). Appropriate reaction to audience responses in accordance with online policies was the first requirement to develop the engagement between the museum and its audience. The Promoting phase duration was 10 weeks from 1st December 2015 to 7th February 2016. This included publishing the newly developed website and social media promotions. The following section will describe in detail the promotion phase and will includes the relevant data. These data will be useful when evaluating the framework effectiveness in section 8.3.

8.2.4.1 The website

As mentioned, the museum's new website was published in two languages (Arabic and English) on 1st December 2015. The website was updated in weekly cycle during the testing period. News and events were uploaded continuously, and weekly measurements were recorded throughout the period.

The researcher noted during this promoting phase there was a massive increase in Arabic website traffic on 2 consecutive days; 3,272 in 31st January and 1,038 in 1st February 2016 (see figure 8-7). This peak cannot be explained and as the differences in numbers is too high it was felt that these two data should be excluded from statistical analysis in section 8.3.1, as extreme values massively skew the normal curve and in order to avoid adversely effecting any statistics analysis and subsequently conclusions. By excluding these two data points, it was felt that a more meaningful analysis could be given.

Figure 8-8 show the Arabic and English website sessions during this 10 week phase, this line graph has excluded the above 2 dates for reasons explained previously.

Figure 8-8: Numbers of Dar Al-Madinah's new website sessions (Arabic)
(source: Google analytics)

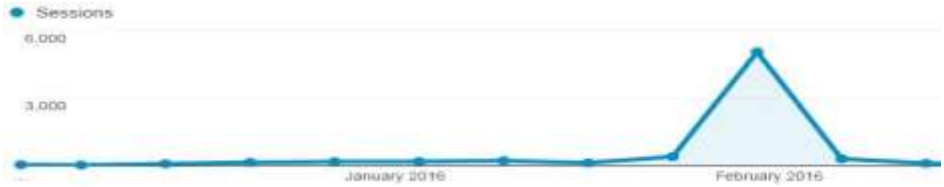


Figure 8-9: Numbers of Dar Al-Madinah's new website sessions (Arabic, English and total)

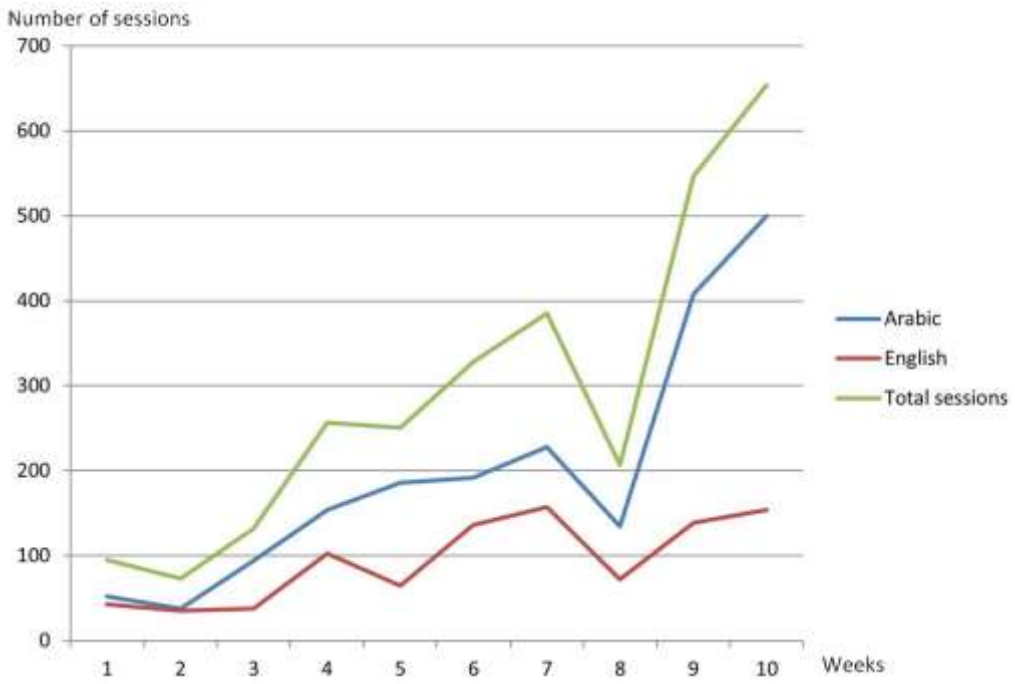


Table 8-9 below presents the statistics of the same period. The new website had a total of 7,206 sessions during the 67 days period, an average of 107.55 daily sessions. Users spent an average of two minutes on each session and viewed on average 1.5 web pages. It was also note that the traffic to the new website had had user who were using internet browsers in more than 40 languages. About 85.5 percent of Arabic version and just over 50 percent of visitors in English version were new session (see Figure 8-9). Figure 8-10 and Figure 8-11 shows the distribution of the new website visitors Arabic and English worldwide by number of session in the same period of 10 weeks.

Full comparison with the base line data will be presented in section 8.3.

Table 8-9 Visits statistics of Dar Al-Madinah's new website

Subject	Statistics		
	Arabic	English	Total
Website sessions	6,514	692	7,206
Number of session's users(visitors)	5,575	358	5,933
Total views	7,772	1,220	8,992
Average number of pages viewed per session	1.19	1.76	1.47
Average duration of sessions	00:00:40	00:03:43	00:02:00
User languages	40	26	---

Arabic English

Figure 8-10 Percentage of new and returning visitors to the new website (Arabic and English)

Figure 8-11 Examples of worldwide distribution of new website visitors around the World (Arabic)

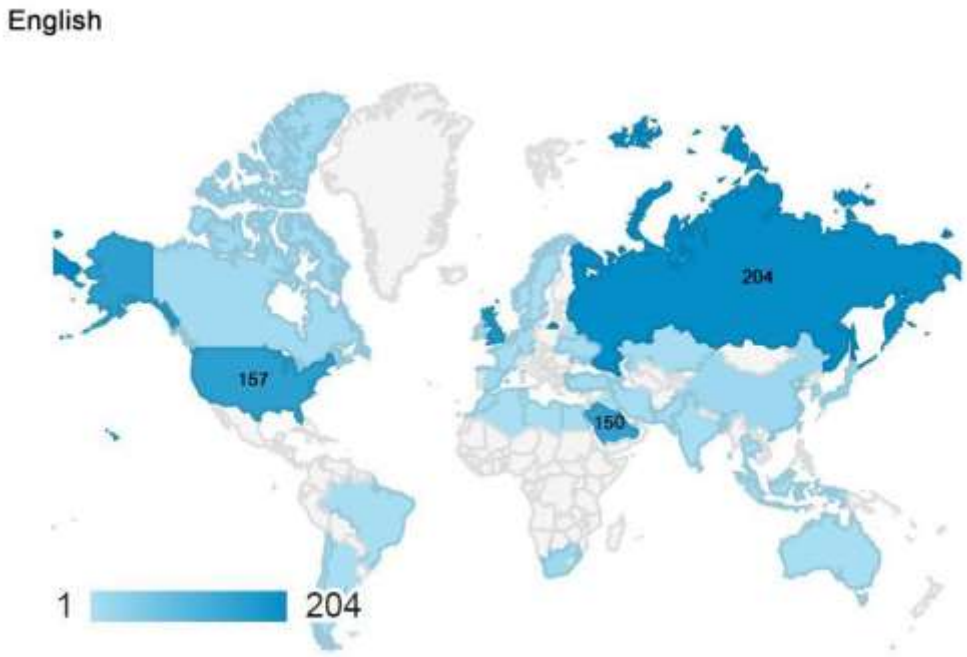


Figure 8-12 Examples of worldwide distribution of new website visitors (English)

8.2.4.2 Social media

Of the two social media platforms it was decided to use by the Museum, as mentioned in section 8.2.2.4, the researcher was only allowed access to Twitter. The museum's Twitter account had 5313 followers at the beginning of promoting phase (1/12/2015), and a total of 3822 tweet were posted by this date. These figures are very important as baseline data and will be necessary in order to measure the improvement of the Twitter activities for evaluation in section 8.3.

The tweets were posted at a minimum rate of three times a day as planned in Planning phase. Figure 8-12 shows posting times for Twitter identified by using klout.com website and managed by using tweetdeck.com.

Klout is a software that uses analysis of Twitter followers to provide users with best times for engaging with their peak usage times. The researcher used this website to optimise the best timings of tweets. Tweetdecks.com is an online Twitter dashboard software that improves on user experience.

Figure 8-13 Example of Dar Al-Madinah Museum tweeting timetable

Figure 8-13 below presents the museum's Twitter account follower's growth during the promoting phase period. As mentioned above, the museum's Twitter account had 5313 followers at the beginning point of promoting action, and this number had increased to 7,096 followers by the end of the testing period. This made the total of 1,783 new followers and the average of 178.3 new followers per week (this is compared to 68.8 new followers per week before the implantation of the framework).

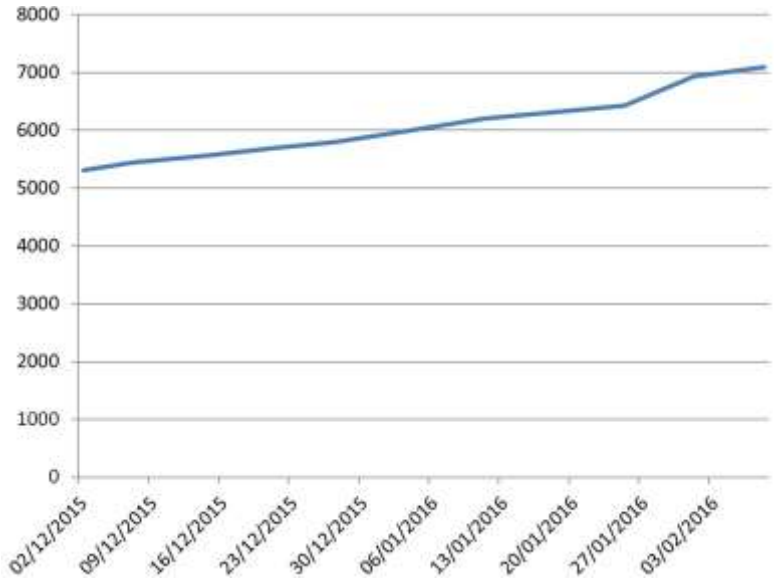


Figure 8-14 Dar Al-Madinah Twitter followers growth

Table 8-10 shows Dar Al-Madinah Museum's Twitter overall statistics during the period that the framework was being applied. The information within this table will be compared to baseline Twitter statistics for the museum in section 8.3.

Table 8-10: Dar Al-Madinah's Twitter usage during the test period

Subject	Statistics
Total tweets (including retweets and replies)	754
Total new tweets	473
Average tweets per week	47.3
Average tweets per day	6.75
Total responses (including retweets and likes)	448
Average response per week	44.8
Total tweet impressions (approximately)	707,800
Average tweet impressions per month (approximately)	235,933
Total profile visits (approximately)	76,041
Average profile visits per month (approximately)	25,347
Total new followers	1,783
Average new followers per week	178.3
Average new followers per day	25.47

8.2.4.3 Email marketing

Two monthly email newsletters were published in this stage, in Arabic and English, the former being sent at the beginning of the Arabic calendar month and the latter at the beginning of the Western one. The e-newsletters during this 10 week period were sent to a total of 1,345 recipients and had been viewed 2,176 times (see Table 8-11). Dar Al-Madinah museum's first published Arabic e-newsletter has been included in Appendix J. As mentioned previously in section 8.2.2.4, the e-newsletter is a new addition to the museums promotional strategy.

Table 8-11: Dar Al-Madinah's e-newsletter statistics

Date	Language	Sent	Views
02/12/2015	Arabic	36	214
01/01/2016	Arabic	251	571
01/02/2016	Arabic	242	236
14/12/2015	English	232	170
11/01/2016	English	293	669
10/02/2016	English	291	316

The impact of this email marketing, along with the website promotion and social media marketing, will be discussed further in the next section.

8.3 Evaluation

For this section, the statistical data before and after implementation of the framework was analysed and compared using SPSS in order to determine if there is a significant statistical change and to assess the effectiveness of the designed framework. The statistical data includes actual visitors, website sessions and Twitter impressions and followers.

Figure 8-2, which has been briefly discussed in the introduction to this chapter, is reproduced below to show the duration of the evaluation for each channel.

Figure 8-2 Periods during which the framework was applied

The researcher has tried to use as much available data as possible, and in this regard, more than 10 weeks of promoting phase data will be used in the statistical analysis. The period beginning of 6th July to the end of November, was excluded from the evaluation because this period relates to the actual implementation of the planning and adapting phases. The data from this time period could not be used as the framework had not been fully applied.

The researcher ensured that the data comparison was for equal periods of time for both before and after framework implementation, as this is vital to ensure a fair and robust comparison between the two sets of data. In addition, the actual dates of data gathering vary between the different tools (website, Twitter and door visitor), the reason for this is due to data availability limitations such as Twitter data being only available in monthly periods.

8.3.1 Evaluating numbers of visitors (sessions) to the Museum's website

The researcher gathered the data on 10 weeks from 30th April 2015 – 6th July 2015 in order to compare it with the data gathered after applying the framework. The website visitor data was arranged in weekly format in order to enable the analysis.

As mentioned previously in section 8.2.4.2, the sessions recorded for 2 days in February 2015 were extreme in value. There was no clear explanation for this and in order to be able to analyse the data, these 2 extreme values had to be taken out of the data analysis subset. They were also removed from the SPSS test because they would adversely affect the results (for further details see figures 8-7 and 8-8).

Table 8-12 below presents the comparison of the data framework implementation for the website promotion, the data shows the different analysis before and after the framework implementation.

Table 8-12: Visits to Dar Al-Madinah's website before and after applying the framework

Subject	Statistics		
	Before	After	Percentage
Total website sessions (10 weeks)	1,523	7,206	373% (up)
Average website sessions per week	152.3	720.6	373% (up)
Average website sessions per day	21.75	102.94	373% (up)
Number of session's users	1,488	5,933	298.7% (up)
Total pages viewed	1,564	8,992	474.9% (up)
Average number of pages viewed per session	1.03	1.47	42.7% (up)
Average duration of sessions	00:00:11	00:02:00	990% (up)
User languages	4	40	900% (up)

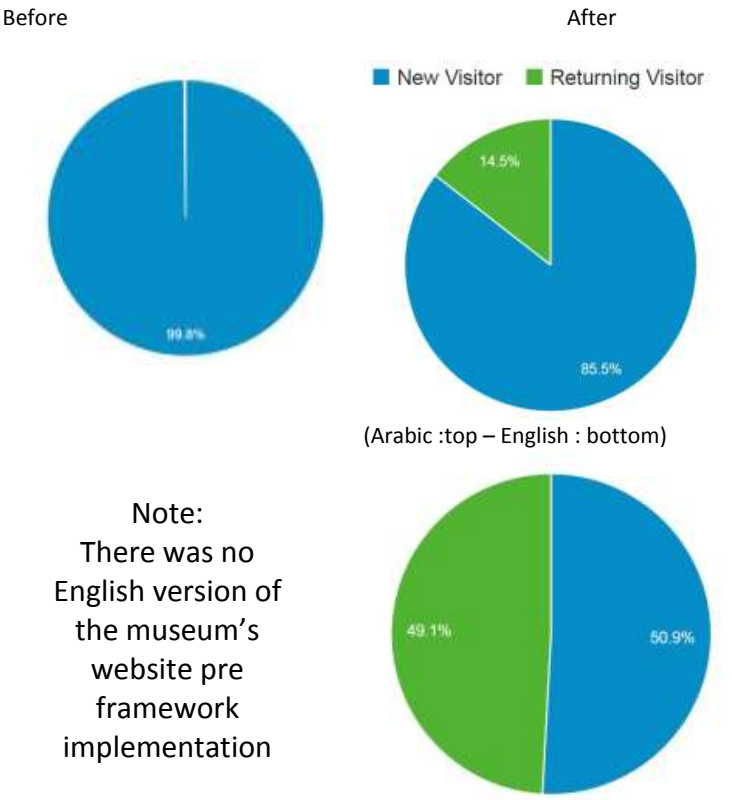
From the table above it can clearly be seen;

- The number of website session (total number of website visitor) increased by more than 3 times.
- The average number of pages viewed per session increased by 42.7%
- The average time spend for each session increased 10 fold.
- For the pre framework implementation the average number of browser languages was 4, this increased to 40.

The above statistics clearly show a massive improvement in website engagement after applying the discussed changes.

Figure 8-14 below shows graphically the percentages of new and returning website visitors before and after framework implementation.

Figure 8-15: Percentage of new and returning visitors (Arabic and English), before and after applying the framework



As noted previously, originally 0.02% of visitors were returnees pre framework, however after implementation this increased to 14.5 % (Arabic version of the website) and 49.1% (English version of the website).

The following section will now describe and present the statistical analysis of the data using SPSS software.

As mentioned in section 3.9, firstly, a normality test was conducted according to which the researcher could select the suitable statistical test for this data. Table 8-13 shows the results of the normality tests for the data. For this study, a dataset of 10 elements, the Shapiro-Wilk test was used. The P-value, at 0.849, is greater than 0.05. The researcher therefore concludes that the data reflects normal distribution.

Table 8-13: Normality test on the number of website visitors before the framework's implementation

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
VAR00003	.175	10	.200*	.966	10	.849

* The lower boundary of the true significance
a. Lilliefors Significance Correction

The results of the normality test on the number of website visitors after the framework was applied is shown in Table 8-14, from which the P-value can be seen to be 0.716 – i.e. more than 0.05. The researcher therefore again concludes that the data reflects normal distribution.

Table 8-14: Normality test on the number of website visitors after the framework's implementation

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
VAR00004	.153	10	.200*	.954	10	.716

* The lower boundary of the true significance
a. Lilliefors Significance Correction

As a result of these normality tests a two-sample T-test was conducted to establish whether or not a significant statistical difference exists, so as to assess the effectiveness of the design frameworks on the numbers of visitors to the Museum's website. The group statistics in Table 8-15 show that the mean for the data before the framework was applied is 91.50, a figure that rises to 247.40 after implementation. The number of elements (weeks) participating in each condition (N= 10). The table thus clearly shows that the mean number of website visitors before implementation is much lower than the post- implementation figure.

Table 8-15: Group statistics for the number of website visitors

	Framwork	N	Mean	Std. Deviation	Std. Error Mean
Website visitors	Before	10	91.50	40.574	12.831
	After	10	247.40	128.767	40.720

Table 8-16 below, the significance value for Levene's Test for Equality of Variances is less than 0.05, obliging the researcher to read from the second row. The significance value is 0.004 – i.e. less than 0.05. The researcher therefore concludes that there is a statistically significant difference between the number of website visitors before and after the framework was applied, and that the differences between the means are not likely due to chance.

Table 8-16 Independent Samples Test (Museum's website visitors)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Website visitors	Equal variances assumed	9.734	.006	-3.652	18	.002	-155.900	42.693	-245.595	-66.205
	Equal variances not assumed			-3.652	10.770	.004	-155.900	42.693	-250.113	-61.687

The SPSS analysis of the museum website activity has shown a statistically significant improvement in all the comparison variables. The next section will evaluate the museums Twitter engagement in a similar manner.

8.3.2 Evaluating the Museum's Twitter engagement

The researcher gathered the data for Twitter during a 4 month period, from February to May 2015. This longer period of time was used in order to enable a more accurate statistical analysis and furthermore Twitter data was only available in monthly sessions.

Table 8-17 Statistical data for the period of four months before and after applying the framework

Month	Total number of tweets	Tweet impressions	Profile visits	Mentions	New Followers
	Before				
May-15	85	118,000	12,900	65	273
Apr-15	84	139,000	14,000	90	270
Mar-15	79	135,000	5687	129	378
Feb-15	88	95,200	2054	111	258

Month	Total number of tweets	Tweet impressions	Profile visits	Mentions	New Followers
	After				
Mar-16	80	178763	16020	100	415
Feb-16	161	241600	17760	127	565
Jan-16	322	482200	351040	358	1066
Dec-15	271	325100	18241	140	610

Comparing the pre and post implementation data for Twitter has shown;

- The number of tweets has significantly increased (this is a direct reflection of museum activity). This was a gradual increase as shown over the 4 months. The data shows an increase in 83.6 percent.
- A 232% increase is noted in the amount of tweet impressions (tweet number of views).
- The number of Twitter profile visits increased by 1023%. This huge increase is mainly due to the massive number of profile visits in Jan 2016. No clear reasons for this huge jump are evident. Although the number of tweets, tweet impression, mentions and followers do also significantly increase, the increase in the number of profile visits is on a different scale. The data source from Twitter analytic showing this increase is found in appendix H.
- The number of new followers increased by 125% after the implementation of the framework.

The next section will discuss in further detail the SPSS analysis for Twitter marketing.

The Twitter data was evaluated using the Twitter impression and the number of new followers. The Twitter impression is the number of times tweets are viewed, and "new followers" means the increase in the number of followers in a particular month. All the data that is used within the Twitter subset analysis is monthly data due to the availability from Twitter analytic (N= 4). This means that all data shown below is for the

data gathering periods (February-May 2015 and December- March 2016, 4 monthly period)

Firstly, a normality test was conducted so that the researcher could select the suitable statistical test for this data. Table 8-18 shows the normality tests for the Twitter impression data before the framework was applied. The Shapiro-Wilk test was used for this study dataset of four elements, from which it can be seen that the P-value is 0.506 – i.e. more than 0.05. The researcher therefore concludes that the data reflects normal distribution.

Table 8-18: Normality test on the Twitter impression before the framework's implementation

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Twitter impression (before)	.255	4	.	.914	4	.506

The results of the normality test on the number of Twitter followers before the framework was applied are shown in Table 8-19. The P-value is 0.820 – i.e. greater than 0.05, from which the researcher concludes that the data reflects normal distribution.

Table 8-19: Normality test on the number of Twitter followers before the framework's implementation

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Twitter impression (after)	.206	4	.	.967	4	.820

The normality test on the Twitter impression data after implementation is shown in Table 8-20. The P-value is 0.755 – i.e. greater than 0.05, from which the researcher concludes that the data reflects normal distribution.

Table 8-20: Normality test on the Twitter impression after the framework's implementation

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Followers (before)	.258	4	.	.956	4	.755

The results of the normality test for the number of Twitter followers after the framework was applied are shown in Table 8-21. The P-value is 0.320 – i.e. more than 0.05, from which the researcher concludes that the data reflects normal distribution.

Table 8-21: Normality test on the number of Twitter followers after the framework's implementation

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Followers (after)	.326	4	.	.876	4	.320

As a result of these normality tests a two-sample T-test was conducted to discover any significant statistical difference in order to enable assessment of the framework's effect on the Museum's Twitter performance. The group statistics in Table 8-22 show that the mean Twitter impression before the framework's implementation is 101,025 for the 4 month period, while the corresponding figure after that implementation is 313,665 (for an equal 4 month post implementation period). The number of participants in each condition (N) is four. Table 8-23 clearly shows that the mean number of visitors before implementation is one third the number after it. Table 8-23 shows the group statistics for the number of Twitter followers. The mean number of followers before the framework was applied is 255, rising to 664 afterwards. It is clear that the mean for the followers before is less than half that for the followers after.

Table 8-22: Group statistics for the Museum's Twitter impression

	Before and after	N	Mean	Std. Deviation	Std. Error Mean
Twitter impressions	Before	4	101025.00	20288.318	10144.159
	After	4	313665.75	133258.157	66629.079

Table 8-23: Group statistics for the Museum's Twitter followers

	Before and after	N	Mean	Std. Deviation	Std. Error Mean
New followers	Before	4	255.75	107.090	53.545
	After	4	664.00	280.667	140.334

Table 8-24 below shows significance deference in new followers is found as Sig value is 0.048, which is less than 0.05. This obliges the researcher to read from the second row. The researcher can therefore conclude that there is a statistically significant difference between the Museum's Twitter impression before and after implementation of the framework (the data gathering period of 4 months before and 4 months after the

framework implementation) and also that the differences between the means are not likely due to chance.

Table 8-24: Independent sample test on the Museum's Twitter impression

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence interval of the difference	
									Lower	Upper
Twitter impressions	Equal variances assumed	8.628	.026	-3.155	6	.020	-212640.750	67396.870	-377554.950	-47726.550
	Equal variances not assumed			-3.155	3.139	.048	-212640.750	67396.870	-421853.299	-3428.201

In Table 8-25, the significance value is greater than 0.05, which means that the researcher would have to read from the first row. The significance value is 0.035 which is less than 0.05. The researcher can thus conclude that there is a statistically significant difference between the numbers of the Museum's Twitter followers before and after the framework's implementation, and that the differences between the means are not likely due to chance.

Table 8-25: Independent samples test on the number of the Museum's Twitter followers

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence interval of the difference	
									Lower	Upper
New followers	Equal variances assumed	2.313	.179	-2.718	6	.035	-408.250	150.202	-775.780	-40.720
	Equal variances not assumed			-2.718	3.855	.055	-408.250	150.202	-831.519	15.019

The analysis has shown that all the improvements in Twitter figures post framework implementation are statistically significant. The researcher will now evaluate the final parameter of the framework, the museum door visitors.

8.3.3 Evaluating statistics relating to visits the Museum building visitor statistics

As part of the framework's implementation, the researcher recorded the number of visitors coming through the Museum's doors. Table 8-26 shows the number of visitors per week and daily average over the data gathering period (19 weeks pre and post framework implementation)

Table 8-26: Museum door visitors

Week	Starting date	Number of visitor per week	Daily average	Starting date	Number of visitor per week	Daily average
	Before			After		
1	31/01/2015	394	65.7	05/12/2015	256	42.7
2	07/02/2015	388	64.7	12/12/2015	323	53.8
3	14/02/2015	358	59.7	19/12/2015	452	75.3
4	21/02/2015	361	60.2	26/12/2015	514	85.7
5	28/02/2015	408	68.0	02/01/2016	537	89.5
6	07/03/2015	359	59.8	09/01/2016	586	97.7
7	14/03/2015	406	67.7	16/01/2016	548	91.3
8	21/03/2015	415	69.2	23/01/2016	617	102.8
9	28/03/2015	332	55.3	30/01/2016	628	104.7
10	04/04/2015	459	76.5	06/02/2016	639	106.5
11	11/04/2015	392	65.3	13/02/2016	623	103.8
12	18/04/2015	376	62.7	20/02/2016	628	104.7
13	25/04/2015	421	70.2	27/02/2016	593	98.8
14	02/05/2015	424	70.7	05/03/2016	717	119.5
15	09/05/2015	412	68.7	12/03/2016	763	127.2
16	16/05/2015	405	67.5	19/03/2016	1087	181.2
17	23/05/2015	381	63.5	26/03/2016	833	119.0
18	31/05/2015	360	60.0	02/04/2016	829	138.2
19	07/06/2015	423	70.5	09/04/2016	1013	191.9
20	14/06/2015	358	59.7			

Figure 8-15 shows the same information in a line chart.

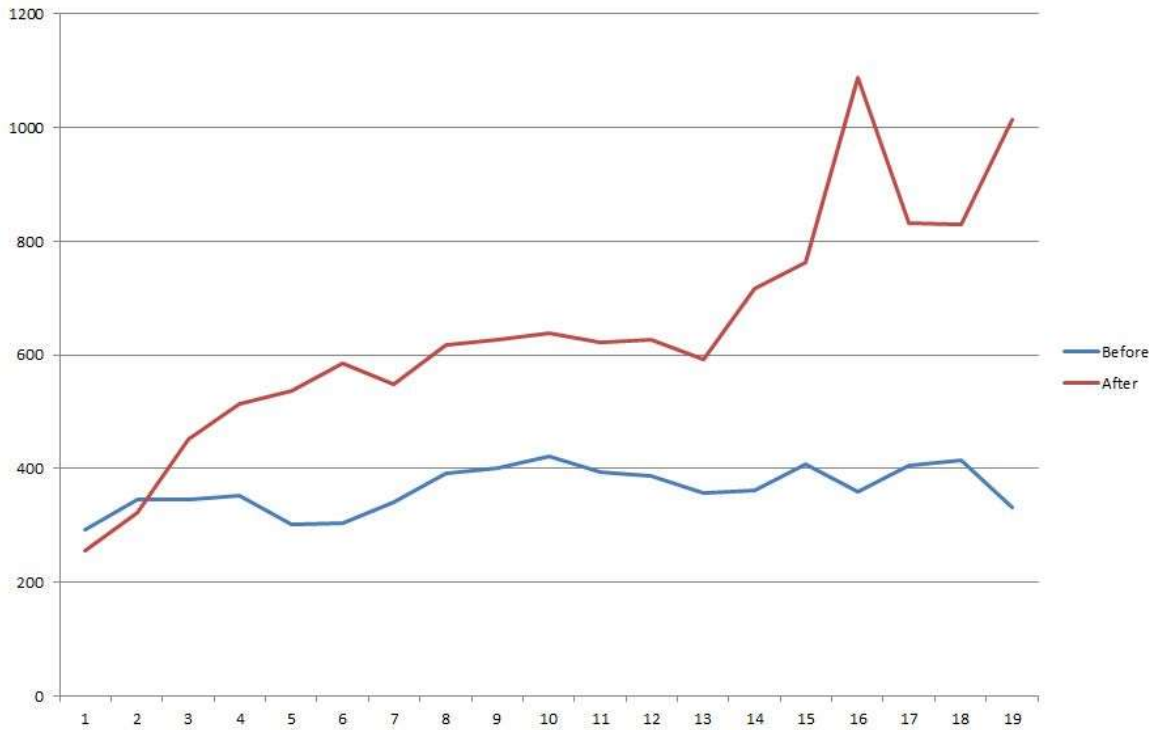


Figure 8-16 Number of door visitor before and after the framework implementation

The above table and chart have clearly show a notable increase in visitors to the museum, which increased by 145.2 percent by the end of the implementation period, obliging the Museum to increase the number of its staff to 19 (from 17).

A peak in visitor number is seen week beginning 19/3/2016. There are no clear reasons that the researcher can find for this. In addition to this, it can also be seen that the general trend is for the number of the museum door visitors to be increasing and this is evident on the line chart.

Visitor data before the framework was applied was not properly or consistently recorded. The researcher was able to gather the data recorded from 24th November 2014 till 14th June 2015, and from the beginning of December 2015 until mid of April 2016. This data proved sufficient to evaluate the framework's effect on the numbers of visitors to the physical Museum. The data for physical visitors was presented in weekly format, covering a period of about 30 weeks before and 19 weeks after the framework's implementation. The researcher compared the 19 weeks before with the 19 after that implementation to ensure accurate statistical analysis could take place. It is noted that during this period of time there were no periods of extended school holidays similar to the UK long summer school break.

Firstly, a normality test was conducted to allow selection of a suitable statistical test for this data. Table 8-27 shows these normality tests. The Shapiro-Wilk test was used for this study dataset of 30 elements. The table below shows a P-value 0.436 which is more than 0.05. The researcher therefore concludes that the data reflects normal distribution.

Table 8-27: Normality tests of the number of Museum visitors before the framework's implementation

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Weekly visitor Numbers	.100	30	.200*	.966	30	.436

The normality test after applying the framework is shown in Table 8-28, from which a P-value of 0.188 is evident. This is more than 0.05. The researcher can therefore conclude that the data reflects normal distribution.

Table 8-28: Normality tests of the number of Museum visitors after the framework's implementation

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Visitor after applying the framework	.221	19	.016	.932	19	.188

a. Lilliefors Significance Correction

The previous normality tests led to two sample T-tests being conducted to discover any significant statistical difference in order to assess the effectiveness of the design frameworks on visitors to the Museum building. Group statistics in Table 8-29 show that the data's mean before the framework's implementation is 395.58, rising to 630.84 after. The number of participants in each condition N= 19 (data gathering period was 19 weeks pre and post framework implementation). The table clearly shows that the mean for visitors before the framework's implementation is almost half of those after it.

Table 8-29 Group statistics for visitors to the Museum building

	Framework Test	N	Mean	Std. Deviation	Std. Error Mean
Weekly visitor	Before	19	395.58	29.744	6.824
	After	19	630.84	199.811	45.840

Table 8-30 shows values for Levene's Test for Equality of Variances. The value in the significance column is less than 0.05, which means that the researcher would have to read from the second row. The significance value is 0.00, which is less than 0.05. The researcher is therefore justified in perceiving a statistically significant difference between the number of visits to the Museum building before and after the framework was applied, and he can also conclude that the differences between the numbers' means they are not likely to be the result of chance.

Table 8-30 Independent samples test for visitors to the Museum building

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Weekly visitor	Equal variances assumed	10.697	.002	-5.076	36	.000	-235.263	46.345	-329.255	-141.271
	Equal variances not assumed			-5.076	18.797	.000	-235.263	46.345	-332.335	-138.191

The above analysis for museum door visitor data has shown that the increase in physical visitor is statistically significant and therefore valid.

8.3.4 Twitter survey and qualitative evaluation

In addition to the above evaluation of the framework implementation (statistical analysis of website, Twitter and door visitor data) the researcher has also attempted to triangulate the evaluation of the primary data. In this regard two extra methods of evaluation have been used, a Twitter survey questionnaire and informal qualitative feedback from the museum management. This allowed feedback from not the only end user such as online social media audience (Twitter survey) but also physical audience feedback via museum management.

8.3.4.1 Twitter survey

A Twitter poll is a new, fast and reliable way to engage the Twitter huge audience for one question. It is the best method for asking particular account followers to answer a particular question. A Twitter poll has been used in this research as a questionnaire survey in order to gather primary quantitative information about the effectiveness of the new web presence associated online marketing strategy.

The researcher used Twitter poll of one question survey. This simple and essential question was: have you recognise any improvement in the museum's online marketing during the last few months? The researcher sent this Twitter questionnaire on 2nd march 2016. A total of 2153 saw this tweet and a total of 128 have participated on it. Table 3-8 below shows the outcome of Twitter poll survey.

Table 8-31 Twitter poll survey result

Subject	Statistics
Impressions	2153
Participants	128
Yes, there is a significant improvement	57%
Not sure	19%
There is not significant improvement	24%

From the table above;

- 57% agreed that there is a significant improvement
- 19% are not sure
- 24% dis-agreed that there is a significant improvement

To conclude, it is clear from figures above that the majority of participant agrees that there is a significant improvement.

8.3.4.2 Qualitative feedback

After the framework was applied fully, the museum manager supplied qualitative feedback to the researcher. The feedback provided was via telephone conversation on 5th May 2016.

The manager informed the researcher, the number of average door visitor has increased significantly since the framework was applied (the average number of door visitors he felt was approximately 200 daily). In addition to this increase in visitors and general engagement he felt it necessary to increase the number of staff to cope with the museum's increased popularity. He increased the number of staff from an original 17 to 27, this was after almost 1 year. It is noted immediately after the framework implementation the number of staff was increased to 19 from 17 (see section 8.3.3). These increases that were needed to staff number clearly shows the success of the framework implementation.

8.4 Chapter discussion

This research aimed to develop a framework for the design of a web presence and an associated online marketing strategy, focusing on museums in Saudi Arabia. The specific objectives of this chapter were to assess the effectiveness of the designed framework.

The original theoretical framework was developed in Chapter 7 by applying the primary and secondary data collected and analysed in Chapters 2, 4, 5 and 6. In order to test the framework, the researcher evaluated and compared the statistical data for a specific period before applying the framework. He then analysed the data for a similar period after the framework was applied (see section 8.3).

This discussion analyses the findings from the statistics for online and physical visitors to the Museum's building and electronic media, which will allow the best evaluation of the framework's effectiveness.

These test results also allow the conclusion that the difference between the number of visitors to the Museum's website before and after the framework's implementation (this was for the data gathering period of 10 weeks pre and post framework implementation) was statically significant ($t=-5.652$, $df= 10.770$ significant at $p<0.005$). This implementation increased the number of website sessions, a result not likely due to chance. This pattern of improvement was also seen for social media engagement and physical door visitors.

The test results likewise show that the difference between the number of the Museum's Twitter impressions before and after implementation (4 month periods) was statically significant ($t=-3.155$, $df= 3.139$ significant at $p<0.005$), and that the growth in numbers of the museum's Twitter followers before and after implementation was statically significant ($t=-2.718$, $df= 6$ significant at $p<0.005$). Again, this increase is in keeping with the difference seen in the engagement of the website users, a result not likely due to chance. This shows that the results of the increase in website users along with the increase in Twitter engagement has also resulted in improvements in physical museum's visitor numbers.

The independent sample t-test results reveal that the difference between the number of visitors to the building before and after implementation of the framework (this was during the data gathering period of 19 weeks pre and post framework implementation) is statically significant ($t=-5.076$, $df= 18.797$ significant at $p<0.005$). Applying the framework increased the number of these visitors, a result that is not likely the result of chance.

These statistics for the Museum's website and social media platforms showed a significant increase after the framework was applied. This resulted in a similar and significant increase in the number of visitors to the Museum itself once the framework had been applied. This result supports the studies by Schoder and Drotner (2013) and the Wexner Centre for the Arts, both of which find a strong relationship between a museum's visitors and its social media activity.

8.5 Conclusion

This chapter has tested and evaluated the framework for the design of the web presence and the associated online marketing strategy for museums in KSA. It consists of two main sections: testing and evaluation. The testing stage involved the implementation process and the evaluation stage involved quantitative and qualitative analysis and data comparisons. The quantitative data relating to testing the framework was analysed using SPSS; the results were then evaluated.

Firstly, the researcher developed a plan to manage the testing and evaluating process. He applied the testing process in the same order as that of the framework's design. The researcher started applying the framework on 6th July 2015 and planned to finish by 23rd September 2015, a period of 110 days. Unanticipated problems caused this end date to be extended to the end of 6th February 2016, adding 135 extra days to the total duration.

There were several reasons why the Museum was not ready to implement the framework. Firstly, the Museum's vision and mission did not meet the framework's requirements in terms of not being clearly defined and realistic, the museum's goals and objectives were similar not in keeping with the framework's requirements (not SMART). Developing the Museum's website took the most time, as the previous one did not meet the framework's requirements, being neither multilingual nor mobile-friendly.

The new website was launched in parallel with the framework's full implementation at the beginning on December 2014. This implementation lasted for 12 weeks, during which the Museum granted the researcher full access to its website, e-newsletter and Twitter account. Time constraints dictated the researcher's subsequent focus on his research.

The next stage was to gather all the framework test data. The researcher analysed the data for the periods before and after the framework's implementation in order to evaluate its effectiveness. Data analysis was conducted using SPSS. A normality test was conducted first, followed by an independent sample t-test to measure the differences between the data before and after implementation.

The conclusion is that the Museum's website and social media platform experienced a significant increase in traffic after the framework was implemented. The

statistical data showed that the museum's weekly average website sessions (visitors) increased by 373%, Twitter monthly average of new followers have increased by 125% and the weekly average of door visitor have also increased by 145%. In terms of the museum's audience views, 57% of twitter followers felt that the museum's online marketing has significantly improved (twitter user survey). Consequently, the museum's management were very pleased with the level of improvement that the museum achieved through the implementation of the framework. As a result, the museum increased the staff from 19 to 23 (see section 8.3 for further details).

It was found one of the challenges in this testing and evaluation process, was that of keeping to time. As previously mentioned, the time allocated to this phase was initially 110 days but once the process had begun the total duration had increased to 245 days. The major factors for this was the logistics and design aspects, it was a difficult process to ensure timely meetings with the museums management and their website design agent.

Another major challenge, which not could be overcome, was the refusal of the museum to provide any access to their Facebook platform. The reason for this was that the Facebook account was managed by a single individual member of staff who refused permission for no clear reasons.

Although there were challenges, the researcher was able to gather enough data over a sufficient time period which was vital to clearly show a statistical difference in outcome. It was clearly shown that after the framework implementation, the museum significantly benefited from increased visitor base online and physical. These improvements may have been even better if Facebook was a part of the framework implementation process.

CHEPTER NINE

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

9 DISCUSSION, RECOMMENDATIONS AND CONCLUSION

9.1 Introduction

This chapter summarises the whole thesis. The researcher aims to outline the research objectives and how they have been fulfilled, the contributions to existing knowledge, recommendations for further research and dissemination of this research outcome.

The main aim of the current study was to develop a framework for the design of web presence and associated online marketing strategy for museums in Saudi Arabia. The aim was supported by the following specific objectives:

i. To examine the existing web presence of museums in Saudi Arabia;
ii. To examine visitors' perceptions of the existing web presence of museums in Saudi Arabia;
iii. To review effective museum web presence and online marketing strategies within UK.
iv. To develop a multimedia-based framework for the design of a web presence and associated online marketing strategy for museums in Saudi Arabia; and
v. To assess the effectiveness of the designed multimedia-based framework for web presence and associated online marketing strategy for the museum in Saudi Arabia using a KSA based case study.

An in depth literature search identified that only a very small number of museums' in KSA had web presence (5 out 140); this confirmed that existing web presence for museums was very poor. A questionnaire was developed to explore visitor's perception of web presence for two of these 5 museums, and this revealed that there was a lack of awareness of the museum's online web presence. Most of the visitors had not seen or engaged with any online activity; rather it was via word of mouth (81% of visitors surveyed had come via word of mouth).

The researcher also conducted face to face interviews with museums staff in KSA, UK and online marketing experts in UK, to explore best practice and identify areas for improvements in museums web presence. In addition two focus groups were held to further develop web design implementation strategies. The researcher then, developed an online based theoretical framework associated with online marketing strategy.

After applying the developed framework a period of testing and evaluation was carried out. This confirmed a significant statistical improvement in all areas of the framework parameters namely, web presence, social media and physical museum visitors.

Statistical analysis showed that the museum's weekly average website sessions (visitors) increased more than three-fold, Twitter monthly average of new followers and physical door visitors more than doubled. Feedback from the museum management confirmed a high level of satisfaction with the framework implementation and in this regard the museum had to increase its number of staff from 17 to 23 to cope better with the increased visitor traffic.

The researcher believed he has successfully fulfilled the above research objectives and showed a positive statistical outcome for the framework and associated online marketing strategy.

9.2 Summary of chapters and findings

This research study aimed to develop a framework for the design of a web presence and associated online marketing strategy for use by cultural organisations, focusing on museums in the KSA. The specific objectives of this study were to examine the existing web presence of museums in the KSA, to examine visitors' perceptions of the existing web presence of museums, to develop a multimedia-based framework for designing a web presence and associated online marketing strategy for museums in the KSA, and to assess the effectiveness of the designed multimedia-based framework.

At the beginning, an in-depth secondary research (literature review) was carried out to distinguish the substantial matters and problems faced by museums and museum visitors in the KSA. This secondary findings, acknowledged prior research and examined a range of primary and secondary sources concerning the study of the web presence of museums in the KSA and related issues in order to understand existing key issues and to provide a theoretical foundation for the following primary and experimental studies. This in depth study identified to the researcher the lack of studies in this area and also identified the very poor exposure of museums in KSA with regards to online presence.

Then the researcher set out to conduct an in-depth observation of the web presence of selected museums in Saudi Arabia and the UK. This in-depth study supported the critical review of secondary studies, and built on the other quantitative and qualitative data collection methods of this research. In order to conduct the observational case studies, the researcher selected four museums, two from Saudi Arabia and two from the UK:

5. The National Museum
6. Dar Al-Madinah Museum
7. Birmingham Museum & Art Gallery
8. National Space Centre

Then a primary study (questionnaires and interviews) was conducted on museums in the KSA and UK, with a quantitative questionnaire being administered to museum visitors in the KSA, and interviews conducted with museum staff in the KSA and museum staff and online marketing experts in the UK. This study had a wider objective of examining and comparing the experience of museum staff, marketing experts and examining successful practice in this field. The two primary studies of questionnaire and interviews are briefly discussed below;

- The questionnaire involved presented the primary research of the survey carried out in this study to identify the core issues and problems faced by museum visitors in Saudi Arabia. This primary research was required as the researcher had to identify the current problems faced by museums in order to confirm the statement of the problem presented in the introduction chapter of this research.
- The interviews presented the primary research carried out in this study to identify the core issues of what web presence design strategies museums in Saudi Arabia are using for their existing web presence, and what web presence design strategies museums and organisations are using in the UK to effectively engage with and increase the number of visitors. It also tried to identify through the interviews some examples of better practice in web usage by museums and organisations in the UK which might be useful for the framework development.

To address the broader objective of considering the web presence experience of museums in both countries, the primary research focused on the staff of selected museums in the KSA, the staff of selected museums in the UK, and multimedia design and digital marketing experts in the UK.

The key finding from this primary research was that very few visitors to the museum were engaged through the museums online presence. This supported the earlier literature review which confirmed a poor online presence for museums in KSA. The interview with museum staff in KSA identified a lack of experience and awareness of how to effectively engage with the museums online presence. This factor may be a reason for the earlier findings of poor web presence of the museums in KSA. Areas of good practice such as SMART objectives and optimisation of web design were gathered from the museums in UK.

Development of the proposed framework concerned the main focus of this research, which was for the design of a web presence and associated online marketing strategy for museums in Saudi Arabia. In this stage, the implications of the main findings from the secondary and primary research were discussed in easy-to-follow sections in order to organise and link the findings and to avoid duplication. The researcher integrated existing related models, literature findings and primary findings in order to develop the proposed framework.

Finally, testing and evaluating of the framework was undertaken. The researcher evaluated the effectiveness of the designed framework by applying it in Dar Al-Madinah Museum in the KSA over a period of ten weeks. The statistical results following the application of the framework were presented, along with statistics related to the period before the application of the framework. A significant statistical improvement in all three parameters of the framework implementation was achieved, the website activity more than tripled, the twitter engagement more than doubled and finally, the physical museum's visitors also more than doubled.

9.3 General discussion

The author believes the research aim of the development of a framework for design of web presence and associated online marketing strategy for museums in KSA was successfully achieved using a combination of secondary and primary research. A statistically significant improvement in all areas of the framework application was noted for the museum in KSA (Dar Al-Madinah).

The internet revolution has spread widely in Saudi Arabia and reshaped its culture (Nazer, 2014; Internet Live Stats, 2015; Pallas & Economides 2008); Hamed and Higgett (2014) argue that museums in Saudi Arabia are still far away from using the internet to promote themselves effectively. Interviews with museum's staff in KSA, had earlier, identified that although there is an awareness of the importance of web presence, there is a clear lack of knowledge on how best to do this. This research was able to develop the framework, and after the implementation at one of the KSA museum, it is clearly shown that a statistically significant improvement can be made as per the implications of Hamed and Higgett above.

The developed framework was designed by taking the advantages of best related models, studying areas of good practice from museums in UK and engaging with professionals within the subject area.

Carroll (2001), Dibb and Simkin (2004), Nekatibeb (2012), AlSamman (2014), Chaffey (2015b) and Lee (2016). Murthy (2011), Alexandria (2015), Loredana (2015) and Baltes (2015) propose that choosing the right frequency and the right content are the key elements for increasing audience engagement. This was further supported by the researcher's focus group. Post implementations of the developed framework's statistical analysis also support these findings.

The framework also identified that implementation of the museums online presence also leads to a higher museum's door visitors. This finding refutes Langa (2014) who claimed that Twitter does not support the engagement with museum's physical visitors. The increase in museums physical door visitors has been shown to be statically significant, further supporting the museum social media engagement. The findings from this study is also supported by Marty (2008) who agrees that most of online museum

visitors are aware that the website is encouraging the relationship between the museum's website and the museum physical visitors.

Part of the success of the framework in this study was the implementation and appropriate staff training by the researcher. Therefore, in order for the successful implementation of the framework and to make it work independently, it would require development of the existing staff. The researcher helped the museum staff with their training needs and also identified strategies for them to be able to work independently thereafter.

It is argued that the developed framework has proven to be very successful and has clearly shown the relationship between online web presence and increasing museum visitors. However, museums in the KSA use more printed advertisements than online marketing. On the other hand, organisations in the UK are almost smoothly combining online marketing and printed advertisements. However, Nekatibeb (2012) in the literature emphasises the argument that it is important to combine online marketing and traditional marketing, as traditional marketing channels are still active and notable in marketing communication. Both traditional and electronic marketing should be used together synergistically to bring the best results.

9.4 Dissemination

The researcher extracted the key results and the main implementation from this study and used this to target a group of field experts and other academic and non-academic audience in a way that encourages them to participates and share their knowledge in this topic. Therefore, the researcher targeted to disseminate the outcome of this study through the traditional vehicles of academic conferences and journal publications. The researcher published one journal article, three conference papers and two posters as listed below;

- First publication: Conference paper

Paper title: A critique of cultural organization's web presence in the kingdom of Saudi Arabia: a study of selected museums

Conference: NODEM 2014 Poland

Engaging Spaces – Interpretation, Design and Digital Strategies

Warsaw, Poland

- Second publication: Conference paper

Paper title: Critique of cultural organization's web presence in the kingdom of Saudi Arabia: a study of selected museums

Conference: 8th Saudi Students Conference, Imperial College London

Imperial College London, 2015

- Third publication: Conference paper

Paper title: Design and implementation of digital marketing for Heritage Museums

Conference: The Fourth International Architectural Conservation Conference 2016

Dubai, UAE

- Fourth publication: Journal paper

Paper title: A Critique of Museum's Web Presence in the Kingdom of Saudi Arabia: A Study of Selected Museums

Journal of Information Technology & Software Engineering

April 30, 2016

- Posters:

- Poster title: Design for web presence for museums in Saudi Arabia

8th Saudi Students Conference, Imperial College London

Imperial College London, 2015

(Winning the best poster)

- Poster title: Museum digital marketing in Saudi Arabia

De Montfort University, 2014

- Poster title: Museum digital marketing in Saudi Arabia
  De Montfort University, 2015
  (Winning 4th place)

The researchers hopes to disseminate the study to the museum body in KSA by sending a copy of this thesis to the Saudi Commission for Tourism and National Heritage (SCTH) in order to them to share the study with all museums in KSA and help them to apply the framework. The researcher has also met his Royal Highness Prince Sultan bin Salman bin Abd Al-Aziz, president of SCTH in The Fourth International Architectural conservation Conference 2016 in Dubai, and agreed to meet him again after the completion of the study in order to disseminate the study for museums in KSA.

9.5 Contribution of the research

By adopting a synthesised theoretical framework and mixed methods approach, this research has expanded upon the present knowledge and has developed a framework for the design of a web presence and associated online marketing strategy for use by museums in Saudi Arabia.

9.5.1 The framework

This research contributes an important framework (Figure 9-1 below) developed from the findings of the present study relating to the effective design of a web presence and associated online marketing strategy for museums in Saudi Arabia. This framework was used with a real museum in KSA in order to test and evaluate it. This research makes a practical contribution to this field through the development of a framework for the development of web presence for museums in Saudi Arabia, investigating the usage patterns of the websites and social media and their performance.

This developed framework has been applied to a real life museum and the data has shown this framework to be effective. The outcome of the current research makes multiple contributions to the body of literature on web presence design in general and on the Saudi Arabian museum context in particular such as the framework for design of web presence and associated online marketing strategy for museums in KSA (Figure 9-1).

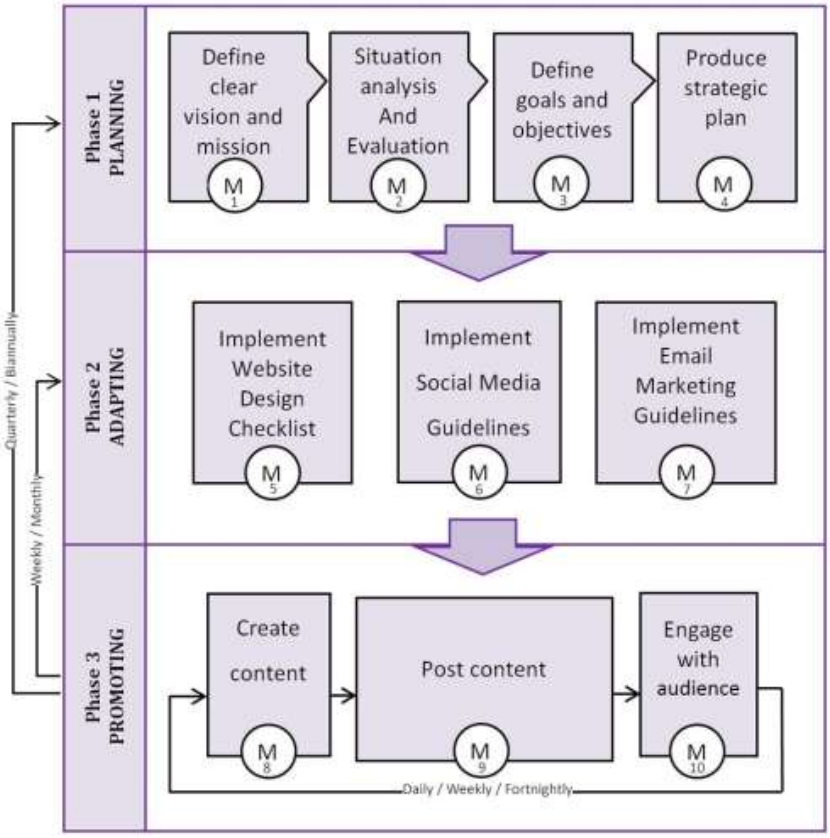


Figure 9-1 The framework

The potential implication of the research findings on the museum sector in KSA is huge; it has been demonstrated the significant potential benefit of improving the museum's web presence, raising awareness of effectiveness of appropriate web presence, training for staff within museums in KSA. Indeed, this approach may be implemented more widely by liaising with other organisation in KSA to further develop implementation such as guidelines for the implementations of the effective web presence for organisation in KSA.

This research was based upon improving the web presence of museums in KSA, however it is the author believe the same framework could be used within other settings beyond the museum sector. More research into the generalisability of the framework maybe required. There is no reason can be found to not be able to implement these guidelines outside of KSA. Although, potential factors may include local population

The guideline for the implementation of the framework can be seen in figure 9-2 below.

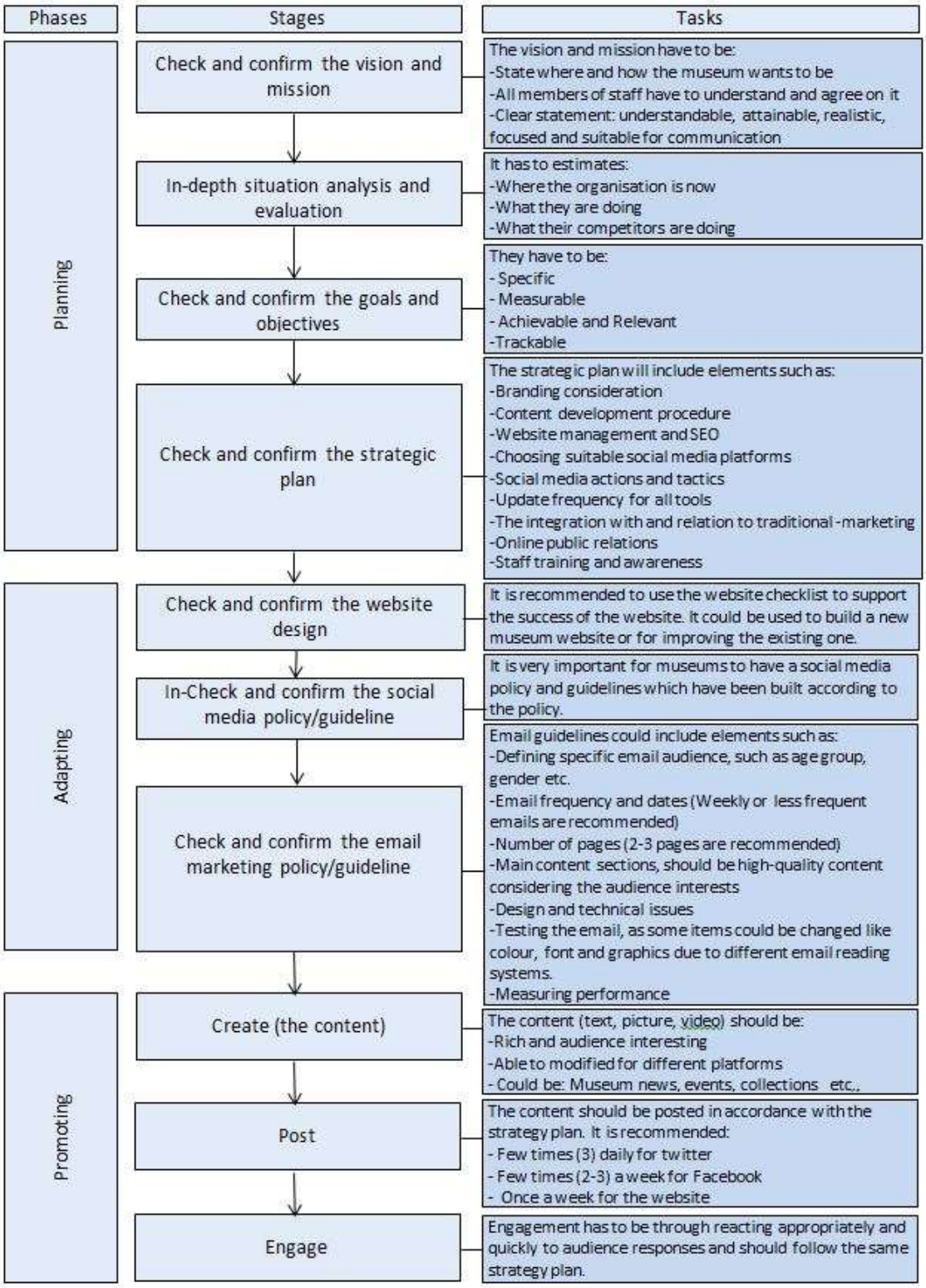


Figure 9-2 A guideline for the implementation of the framework

9.5.2 Checklist of museum website design features

Checklists of website design features in the field of the web presence of museums represent a gap in the literature. The present study empirically contributes to this field through the development of a checklist of museums' website design features (Tables 4-4, 4-5, 6-7 and 4-7). This framework was used in order to test and evaluate the museum websites in the observational case studies of this research.

Unlike Stokes(2011), Park and Uribe(2008), the Saylor Foundation(2011) and Mohamadesmaeil and Koohbanani's (2012) checklists generally do not include all of the elements of web presence together.

9.5.3 New design processes and method

The review of the literature has shown a gap in the present knowledge in terms of designing a process or procedure for developing a framework for web presence design. This research empirically contributes to this field by developing a smooth, logical and step-by-step theoretical framework development process to be used in web presence design (see Figure 7-2).

The aim of the framework development process was to help the researcher to develop the proposed framework in this research. This process started from the current models or frameworks in the literature in the field and took into account the required primary studies to be analysed and implemented together.

9.6 Limitations of the research

As the current research focused on several topics, especially museum culture in Saudi Arabia, the research encountered a series of challenges:

- Constraints of time did not allow the researcher to extend the duration of the framework testing and evaluation stages.
- The research context was limited to the KSA and the subject of museum web presence and associated online marketing strategies.
- A limited number of museums have web presence in the KSA.

- The targeted museums had limitations due to language restriction (limited to Arabic and English).
- A lack of responses and refusal of participation from the most well-known museum meant that the researcher was not allowed to interview staff from this museum.
- The duration of the PhD study did not allow the researcher to apply the framework for other organisations or companies (in KSA and other countries) to be incorporated into this research project.

9.7 Recommendations

The listed recommendations will enhance the current situation of museums in the KSA and will help further research in related fields.

9.7.1 Recommendations for museums in the KSA

Museums in the KSA are recommended to apply the framework developed in this study as an applicable tool to gain the most benefits from internet usage and to overcome the current situation regarding the lack of experience in the field of museum web presence design and associated online marketing strategies in the KSA.

9.7.2 Recommendations for future research

The main recommendations are as follows:

- Researchers are recommended to extend the period of the implementation of the testing of the framework to better evaluate the outcomes.
- Researchers are recommended to further test and evaluate this study in other museums in the KSA.
- Researchers are recommended to conduct this study in other cultural organisations in the KSA.

- Researchers are recommended to conduct this study in companies in the KSA.
- Researchers are also recommended to conduct this study in other Arabic and non-Arabic countries.

Further research is needed into this study to establish the validity of implementation of the researched framework; it may be that the framework cannot be applied within other areas such as cultural organisations or other countries due to unknown factors.

9.8 Strength of the research

This research identified through a rigorous process factor that were limiting museum engagement within the KSA. The author ensured that a validated method was used to design and implement a framework to improve on this engagement. The research findings have clearly shown a significant improvement in all aspects of this, this has been confirmed with statistical analysis; this is a significant strength of this study.

The author believes that the same framework or further developed framework may be applied to other countries and organisation with similar results due to the framework not being built for a single application but rather to be applicable to any process or newly developed social media platforms (due to the process development within the framework).

9.9 Conclusion

The limited research and studies on the subject of web presence design and associated online marketing strategies, especially in the KSA, was one of the main motivating factors for undertaking this research.

The findings of this study have revealed that the design of the framework for web presence design and associated online marketing strategies for museums in Saudi Arabia are primarily dependent on the correlation between understanding the culture, online marketing and design within the context of museums. Although there are known theoretical framework design tools for web presence design in Saudi museums, the study was able to practically demonstrate the effectiveness of the designed multimedia-based framework for the design of a web presence and associated online marketing strategy for a museum in Saudi Arabia.

The primary findings were validated and the developed framework was tested and evaluated empirically. It is on these premises that the researcher is confident in the effectiveness of the designed multimedia-based framework developed in this study. The likelihood is that this framework will be adopted in the near future by museums in the KSA and this research will benefit future researchers in this field.

Overall, this study and its findings aimed to promote museums in the KSA effectively in order to enhance the museum culture in the KSA. Therefore, there is a need for more research in the KSA to commence such a challenge and to initiate more studies to provide more tangible results to improve the KSA society. Thus, the aim of the study has been achieved through the development of a multimedia-based framework. Also, all of the research objectives and research questions stated at the beginning of this thesis have been addressed.

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APPENDICES

APPENDIX A : LIST OF REGISTERED MUSEUMS IN SAUDI ARABIA

City	Museums		Website	Facebook	twitter
Riyadh (27)	The National Museum	N	www.nationalmuseum.org.sa	N/A	N/A
	Antiquities Museum – King Saud University	E	N/A	N/A	N/A
	Museum of Currencies in Riyadh	E	N/A	N/A	N/A
	Al-Masmak Historical Museum	E	N/A	N/A	N/A
	Saqr Al-Jazeera Aviation Museum	E	N/A	N/A	N/A
	Abdul-Rahman Rashid Al Zannan Museum	P	N/A	N/A	N/A
	Ahmad Omar Al-Zahrani Museum	P	N/A	N/A	N/A
	Heritage Museum of Arts and Crafts	P	N/A	N/A	N/A
	Al-Hamad Museum	P	N/A	N/A	N/A
	Ad-Dalam Historical Museum	P	N/A	N/A	N/A
	Ad-Dalam Museum	P	N/A	N/A	N/A
	Saderiyah Museum	P	N/A	N/A	N/A
	Omairi Heritage Museum	P	N/A	N/A	N/A
	Maghrabi Museum	P	N/A	N/A	N/A
	Al-Waily Museum	P	N/A	N/A	N/A
	Al-Wakeel Heritage Museum	P	N/A	N/A	N/A
	Ad-Dhuwaihi House Heritage Museum	P	N/A	N/A	N/A
	Museum of roots and heritage	P	N/A	N/A	N/A
	Diyar Al-Ezz Museum (House of Glory)	P	N/A	N/A	@o77o7 856
	Shebh Al-Jazeerah Museum (Peninsula)	P	N/A	N/A	N/A
	Saleh Ibrahim Al-Musa Museum	P	N/A	N/A	N/A
	Talal Nashar Heritage Museum	P	N/A	N/A	N/A
	Al-Mez'el Family Museum	P	N/A	N/A	N/A
	Oshairat Sudair Heritage Museum	P	N/A	N/A	N/A
	Mushaweh Al-Mushaweh Museum	P	N/A	N/A	N/A
	Nafahat Al-Madhi (Past Inspiration Museum	P	N/A	N/A	N/A
	Yousef Abdul-Rahman Al-	P	N/A	N/A	N/A

	Mushaweh				
Makkah (21)	Al-Haramain Museum in Makkah	E	N/A	N/A	N/A
	Makkah Museum	E	N/A	N/A	N/A
	Jeddah Museum	E	N/A	N/A	N/A
	Altaif Museum	E	N/A	N/A	N/A
	Altayebat Museum	P	N/A	305	N/A
	Ahmad Uqaili Museum	P	N/A	N/A	N/A
	The Past Authenticity Museum	P	N/A	N/A	N/A
	Human Heritage Museum	P	N/A	186	N/A
	Al-Jufaini Museum	P	N/A	15	N/A
	Islamic Dinar Museum	P	www.dim99.com	N/A	N/A
	The Museum of Prophet - May Allah's Peace be upon him	P	N/A	N/A	N/A
	Al-Sayyali Museum	P	N/A	N/A	N/A
	Al-Shareef Museum	P	N/A	f	N/A
	Al-Shalabi Museum	P	N/A	N/A	N/A
	Al-Wash'ha Museum	P	N/A	N/A	N/A
	Um Al-Doom Museum	P	N/A	N/A	N/A
	Um Al-Qura Museum	P	N/A	N/A	N/A
	Saud bin Saad bin Hareesh Museum	P	N/A	N/A	N/A
	Okad Museum	P	N/A	N/A	N/A
	Currency Treasures Museum	P	N/A	N/A	N/A
Al Madina (12)	Al-Ula Museum	E	N/A	N/A	N/A
	Al Hejaz Railway Station Museum	E	N/A	N/A	N/A
	Abu Ra'ed Museum	P	N/A	N/A	N/A
	Hamnah Heritage Museum	P	N/A	N/A	N/A
	Dinar and Dirham Museum	P	N/A	N/A	N/A
	Madinah Heritage Media Museum	P	www.madinamuseum.com	534	N/A
	Khaibar Museum	P		381	N/A
	Radhwa Heritage Museum	P		N/A	N/A
	Salamah Al-Johani Museum	P	www.museumsalama.com (Now N/A)	N/A	N/A
	Taibah Heritage Museum	P	N/A	N/A	N/A
	Mohammed Khulais Al-Harbi	P	N/A	N/A	N/A
	Dar Almadinah Museum	P	www.dar-almadinah.com	2268	N/A
	World of Space and Astronomy	P	N/A	648	N/A
Eastern Region (15)	Dammam Museum	E	N/A	N/A	N/A
	Saudi Aramco Museum	E	N/A	N/A	N/A
	Al Ahsa Museum	E	N/A	740	N/A
	Abu Radha Museum	P	N/A	N/A	N/A
	Albu-Ubaid Museum	P	N/A	N/A	N/A

	Al-Khalifa Museum	P	N/A	N/A	N/A
	Al-Danat Museum	P	N/A	N/A	N/A
	Al-Sa'eerah Museum	P	N/A	N/A	N/A
	Al-Na'atil Museum	P	N/A	N/A	N/A
	Saleh Abdullatif Al-Thafer Museum	P	N/A	N/A	N/A
	Abdullah Al-Asmari Museum	P	N/A	N/A	N/A
	Abdul-Razzaq Al-Arab Museum	P	N/A	N/A	N/A
	Faydh Al-Zaman Museum	P	N/A	N/A	N/A
	Kunooz Al-Madi Museum	P	N/A	N/A	N/A
	Waleed Al-Najem Museum	P	N/A	f	N/A
Asir (30)	Al-Namas Museum	E	N/A	N/A	N/A
	Ibn Sofan Heritage Museum	P	N/A	N/A	N/A
	Abu Adel Museum	P	N/A	N/A	N/A
	AL-Ajyal Museum	P	N/A	f	N/A
	Al-Raqdi Museum	P	N/A	N/A	N/A
	Al-Shefa Museum	P	N/A	N/A	N/A
	AL-Amiriyah Museum	P	N/A	N/A	N/A
	Al-Arsh Heritage Museum	P	N/A	N/A	N/A
	AL-Ghilani Museum	P	N/A	N/A	N/A
	The Heritage Village Museum	P	N/A	N/A	N/A
	Al-Yehiya Museum	P	N/A	N/A	N/A
	Bilad Rafidah Heritage Museum	P	N/A	N/A	N/A
	Belgern Heritage Museum	P	N/A	N/A	N/A
	Bin Khalaf Museum	P	N/A	N/A	N/A
	Bin Me'ateq Museum	P	N/A	N/A	N/A
	Tanomah Archeological Museum	P	N/A	N/A	N/A
	Helba Museum	P	N/A	N/A	N/A
	Dar AL-Me' Museum for Culture and Heritage	P	N/A	N/A	N/A
	Salem bin Yahya Al-Shehri Museum	P	N/A	N/A	N/A
	Sebt Al-Alaya Museum	P	N/A	N/A	N/A
	Ali Muhammed Al-Asimi Museum	P	N/A	N/A	N/A
	Ghurman bin Yahya Museum	P	N/A	N/A	N/A
	Al Oteifa Village Museum	P	N/A	N/A	N/A
	AL-Olayan Village Archeological Museum	P	N/A	N/A	N/A
	Meshrif Al-Amri Museum	P	N/A	N/A	N/A
	Maidan Al-Turath Museum	P	N/A	63	N/A
	Al-Belqerb Town Museum	P	N/A	N/A	N/A
	Mawrooth Al-Ajdad Museum	P	N/A	N/A	N/A

	Al-Fodhoul Village Heritage Museum	P	N/A	N/A	N/A
	Tamnia Heritage Museum	P	N/A	N/A	N/A
Jazan (2)	Jabal Tallan Museum	P	N/A	N/A	N/A
	Jazan Museum	E	N/A	N/A	N/A
Najran (2)	Najran Museum	E	N/A	N/A	N/A
	Al-Sunaij Museum	P	N/A	N/A	N/A
Al-Jouf (6)	Al Jouf Museum	E	N/A	N/A	N/A
	Al-Shajrah Heritage Museum	P	N/A	N/A	N/A
	Nawaf Al-Rashid Museum	P	N/A	N/A	@AlnueasirMuseum 897
	Nasser Qader AL Arrouj Heritage Museum	P	N/A	N/A	N/A
	Al-Wezaiman Museum	P	N/A	N/A	N/A
	Al-Nwaiser Heritage Museum	P	N/A	N/A	N/A
Hail (7)	Hail Museum	E	N/A	N/A	N/A
	Aja and Salma Heritage Museum	P	N/A	N/A	N/A
	Thuwaini Museum	P	N/A	N/A	N/A
	Dhuwaili Museum	P	N/A	N/A	N/A
	Khelef Saad Al Gahnim Heritage Museum	P	N/A	N/A	N/A
	Aroos Al Shimal Museum	P	N/A	N/A	N/A
	Al Nayef Archeological Palace	P	N/A	N/A	@alnaif_museum 167
Qaseem (6)	Hisyani Museum	P	N/A	162	N/A
	Hamdan Museum	P	N/A	N/A	N/A
	Ibri Heritage and Antique Car Museum	P	N/A	N/A	N/A
	Dar Alajdad Museum	P	N/A	N/A	N/A
	Dubaikhi Palace Museum	P	N/A	N/A	N/A
	Mohammed Al Nu'aim Museum	P	N/A	N/A	@mothaf_alaneem 36
Northern Region (3)	Northern Borders Museum	E	N/A	N/A	N/A
	AL-Obaid Museum	P	N/A	N/A	N/A
	Al-Jawharah Heritage Museum	P	N/A	N/A	N/A
Al Baha (2)	Baha Museum	E	N/A	N/A	N/A
	Mohammed bin Misbah Museum	P	N/A	N/A	N/A
Tabuk (5)	Tayma Museum	E	N/A	N/A	N/A
	Tabuk Museum	E	N/A	N/A	N/A
	Al-Fajr Heritage Museum	P	N/A	28	N/A
	Al-Kenani Heritage Museum	P	N/A	N/A	N/A

APPENDIX B: QUESTIONNAIRE (FOR PEOPLE VISITING MUSEUMS)

QUESTIONNAIRE (FOR PEOPLE VISITING MUSEUMS)

Museum:

Gender :(M, F) , **Age**: , **Nationality**:

1	How did you hear about this museum?	Web	Social media	Ad	People	Other
2	Have you seen the website of this museum?	Yes	No	If No, go to Question Number 12		
3	If yes, what did you use it for?	Knowledge	Info	News	Fun	other
4	Was it useful?	Yes	Not sure	No		
5	Is there any encouragement to visit the museum in the web site?	Yes	Not sure	No		
6	Was the web site address memorable?	Yes	Not sure	No		
7	Do you think the web site is easy to use?	Yes	Not sure	No		
8	Do you think the web site well designed?	Yes	Not sure	No		
9	If No why not?					
10	Do you think the web site has appropriate contents?	Yes	Not sure	No		
11	If No why not?					
12	Do you follow or like any of social media for this museum?	Yes	No			
13	Have you seen any social media posts for this museum?	Yes	No	If No, go to Question Number 15		
14	If yes, what? Were they useful?	Yes	Not sure	No		
15	Do you think website is important for museums?	Yes	Not sure	If No, go to Question Number 18		
16	If so, Why?	Knowledge	Info	News	Fun	other
17	Do you think social media is important for museums?	Yes	Not sure	No	Finish	
18	If so, Why?	Knowledge	Info	News	Fun	other

APPENDIX C : RESEARCH ETHICS CONSENT FORM

RESEARCH ETHICS CONSENT FORM

I am collecting concocting data collection to complete research for my PhD in Multimedia design at De Montfort University. I would like to ask you to participate in my study. I would like to reassure you of your anonymity and the confidentiality of all personal data.

Title of the Project: The development of a theoretical framework for the design of the web presence and associated online marketing strategy for cultural organisations in Saudi Arabia.

Researcher: Muneer Hamed, PhD student at De Montfort University.

Contact address: 17Hazeldene Road, Leicester, LE5 1UA

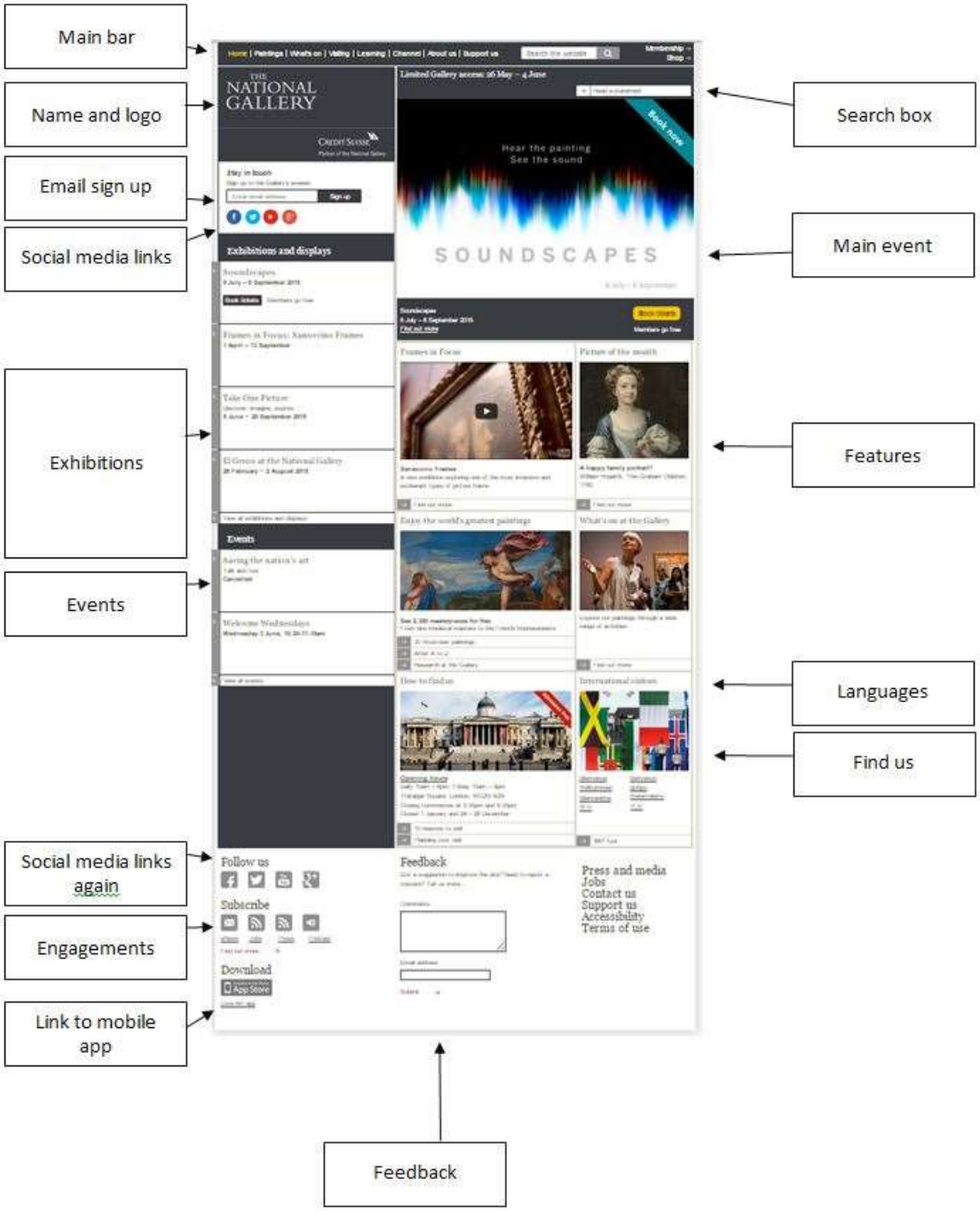
Voluntary Participation:

Participation in this study is completely voluntary. Please be aware that if you decide to participate, you may stop at any time and you decide not to answer any specific question if you wish.

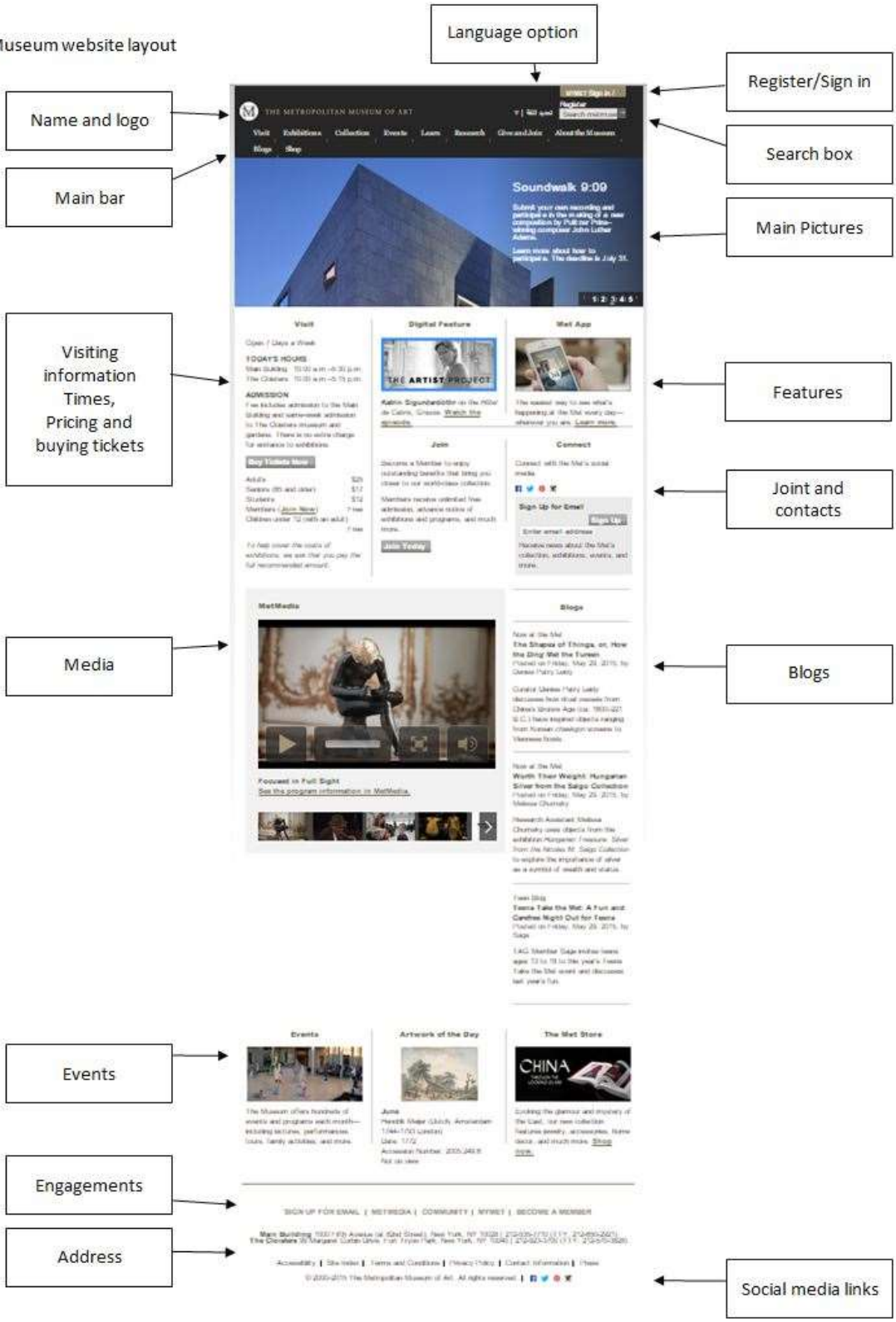
By signing this form I am attesting that I have read and understand the information above and I freely give my consent/assent to participate.

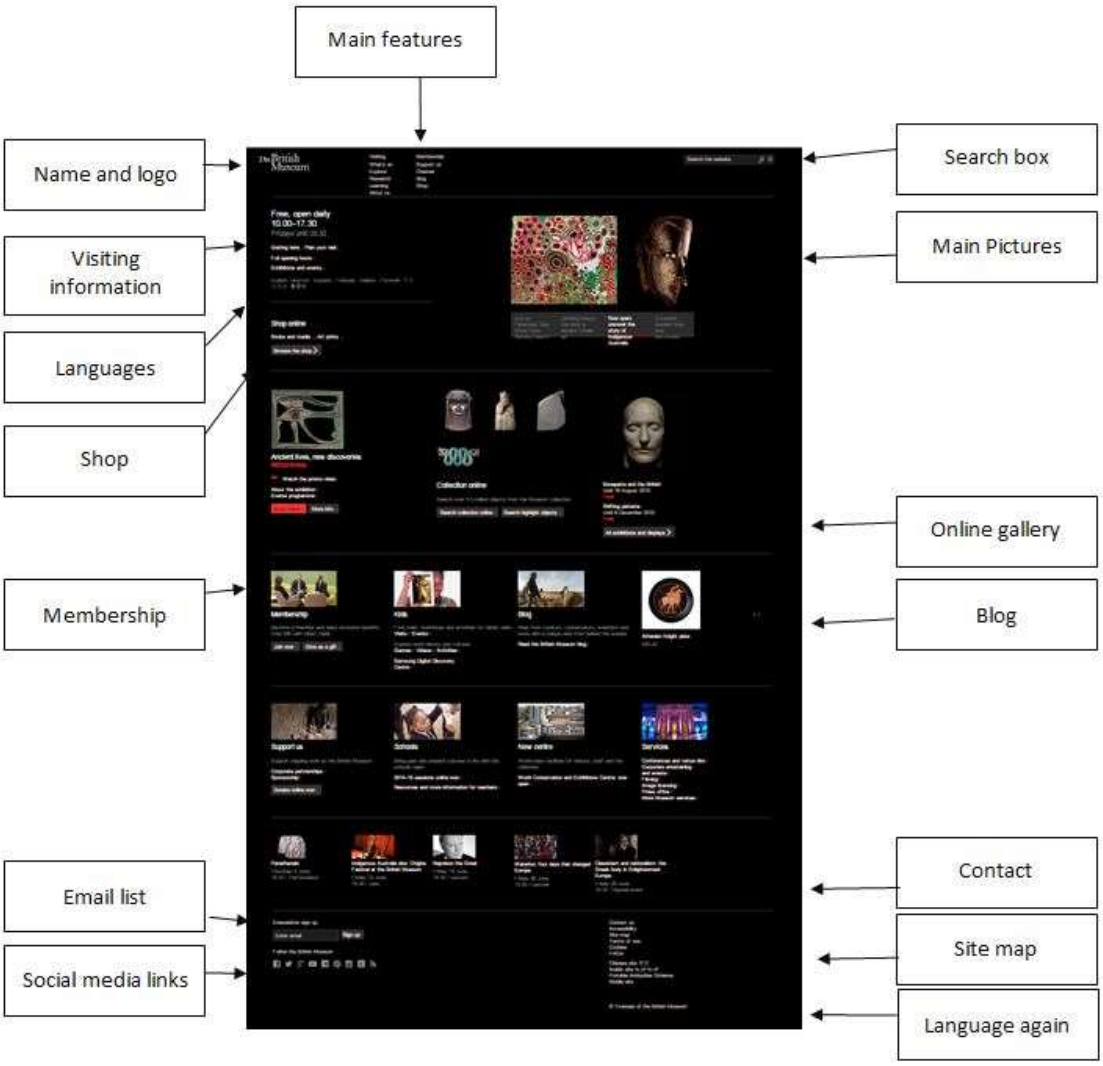
_____	_____	_____
Name of Participant	Date	Signature
Muneer Hamed		
Name of Researcher	Date	Signature

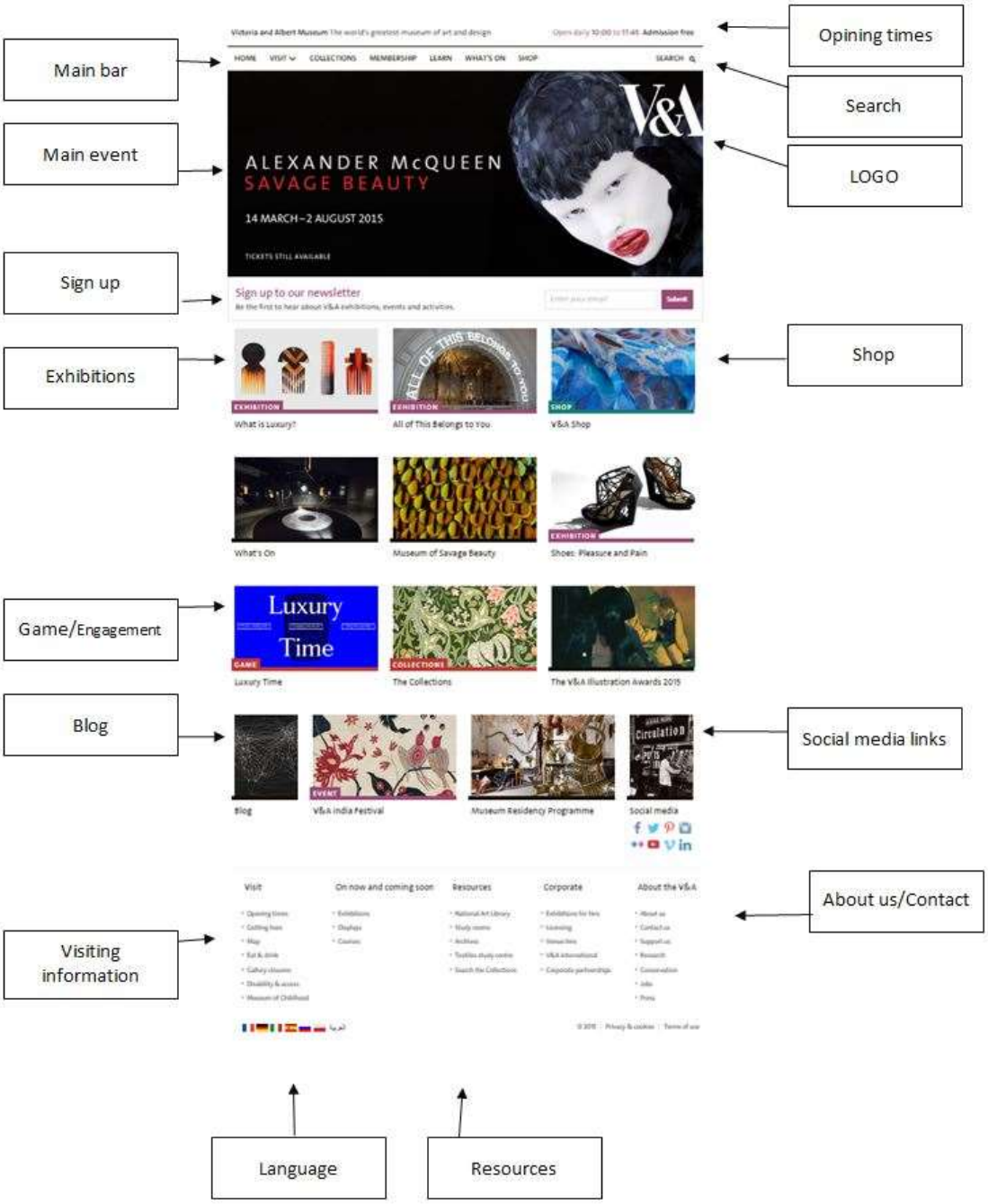
APPENDIX D: TOP MUSEUMS PAGE LAYOUT ANALYSING

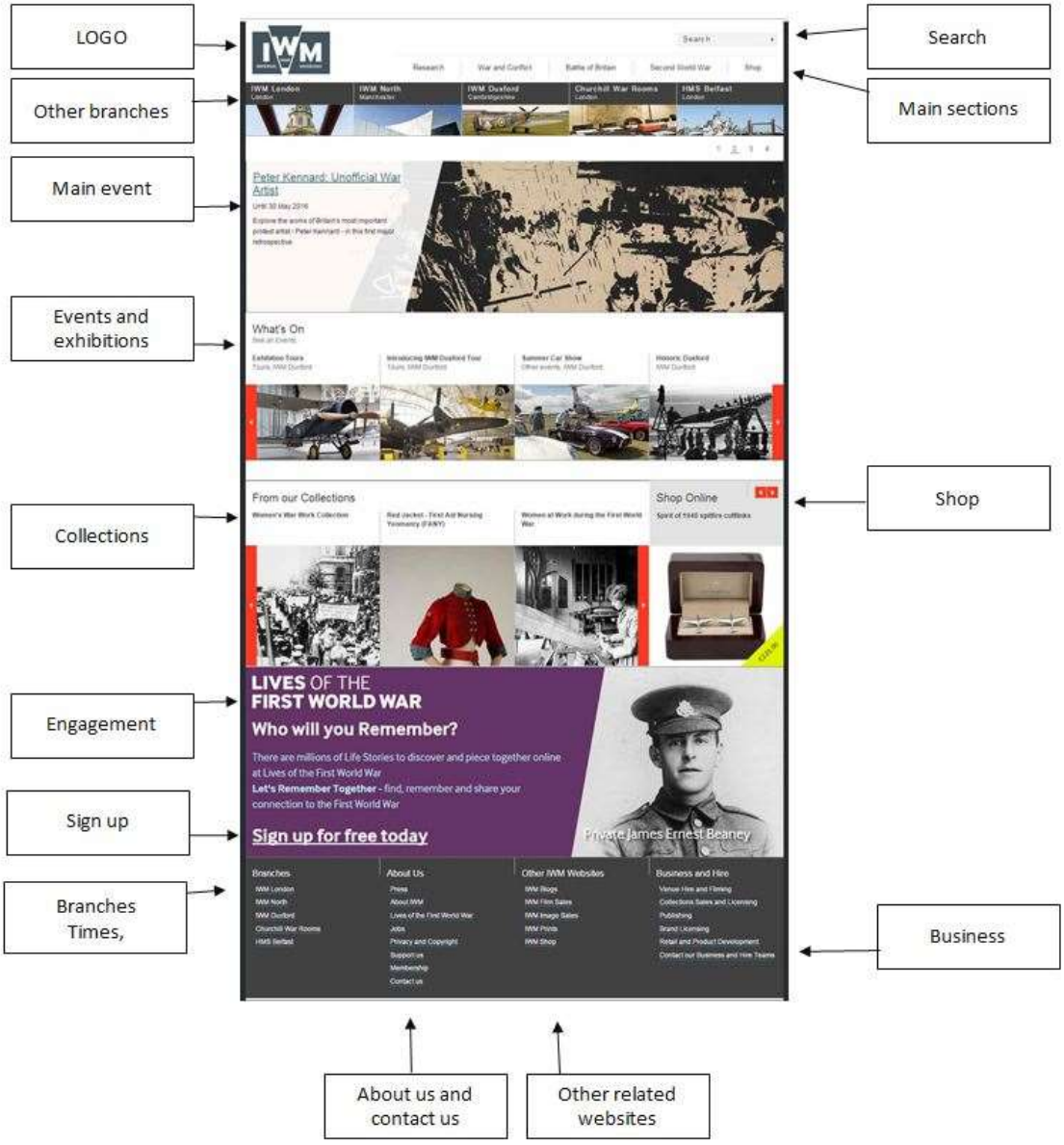


Museum website layout

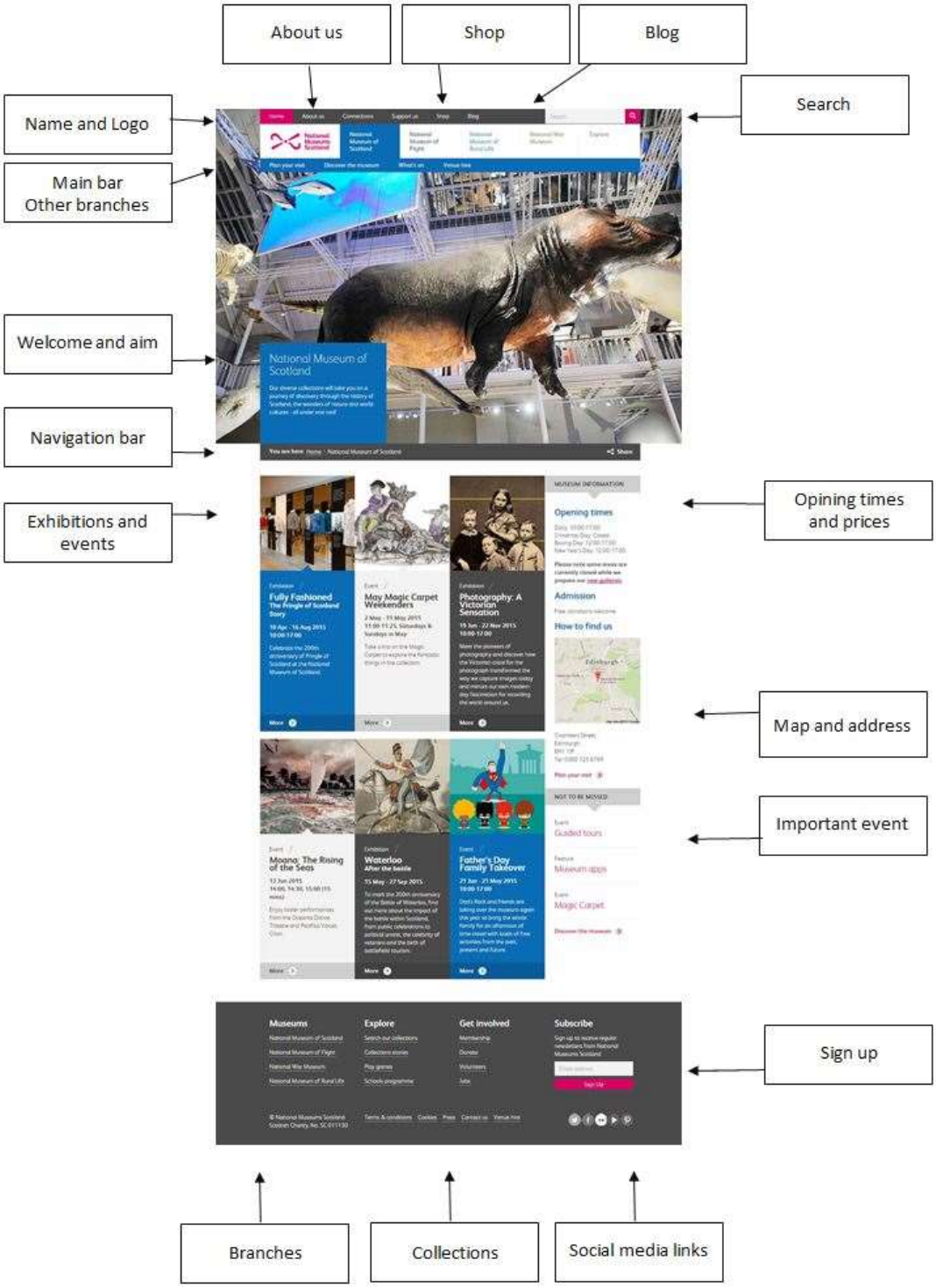


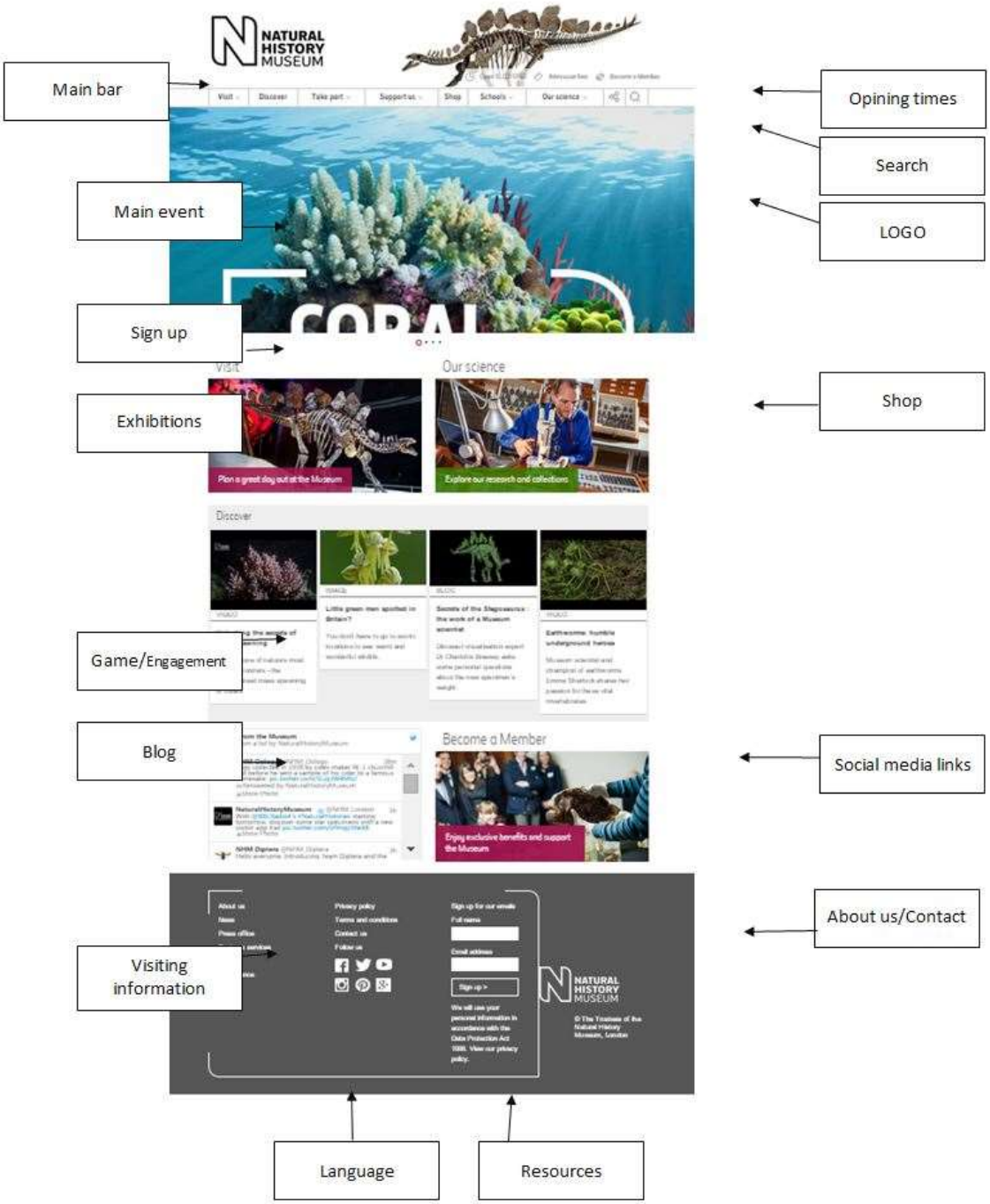

Main features
Name and logo
Visiting information
Languages
Shop
Membership
Email list
Social media links
Search box
Main Pictures
Online gallery
Blog
Contact
Site map
Language again


Main bar
Main event
Sign up
Exhibitions
Game/Engagement
Blog
Visiting information
Opining times
Search
LOGO
Shop
Social media links
About us/Contact
Language
Resources
ALEXANDER McQUEEN
SAVAGE BEAUTY
14 MARCH–2 AUGUST 2015
Sign up to our newsletter
Luxury
Time


LOGO
Other branches
Main event
Events and exhibitions
Collections
Engagement
Sign up
Branches Times,
Search
Main sections
Shop
Business
About us and contact us
Other related websites
Peter Kennard: Unofficial War Artist
What's On
From our Collections
Shop Online
LIVES OF THE FIRST WORLD WAR
Who will you Remember?
There are millions of Life Stories to discover and piece together online at Lives of the First World War
Let's Remember Together - find, remember and share your connection to the First World War
Sign up for free today
Private James Ernest Beaney
Branches
About Us
Other IWM Websites
Business and Hire


About us
Contact us
Name and LOGO
Main bar
Search
Shop
Main event
What's on
Welcome
Opining times
and prices
Social media
Blog
Visiting
information
Social media links
Font size
Language
National Railway Museum
Highlights of our Collection
Welcome
National Railway Museum
What's on
Theatre Royal collaboration
Find us on Facebook
Flying Scotsman update
We're bringing history to life
Latest from the blog
Connect with us
Visit us
Stay updated
Support Us
VisitYork
2014
Winner


About us
Shop
Blog
Search
Name and Logo
Main bar
Other branches
Welcome and aim
Navigation bar
Exhibitions and events
Opining times and prices
Map and address
Important event
Sign up
Branches
Collections
Social media links
National Museum of Scotland
Opening times
Admission
How to find us
Fully Fashioned
May Magic Carpet Weekenders
Photography: A Victorian Sensation
Waterloo
Father's Day Family Takeover
Guided tours
Museum apps
Magic Carpet
Museums
Explore
Get involved
Subscribe


Main bar
Opining times
Search
LOGO
Main event
Sign up
Shop
Exhibitions
Game/Engagement
Blog
Social media links
About us/Contact
Visiting information
Language
Resources

APPENDIX E: THE MUSEUM STAFF INTERVIEW QUESTIONS

INTERVIEW (FOR PEOPLE WHO RUN MUSEUMS)

Museum:

Position:

Gender: (M , F) , Age:

NO	QUESTION	COMMENTS
1	Do you think a website is important for museums?	
2	Do you think your web site reaches your audiences?	
3	What is the main purpose (aim) of the website of your museum?	
4	What are the main content areas for the web site?	
5	How often is the web site updated?	
6	How will users be notified about updates to the web site?	
7	How do you evaluate your museum web site for effectiveness?	
8	Who designed the museum's web site?	
9	Do you think your web site has an appropriate design?	
10	Did you or the designer do any research for this design?	
11	Do you think social media is important for museums?	
12	From your point of view, what is the purpose of social media for museums?	
13	Are your audiences for the social media different from the website?	
14	Do you think your social media platforms or tools reach your audiences?	
15	What is the main purpose (aim) of the social media for your museum?	
16	What are the main typed of content you post on social media?	
17	What are the design features you consider when developing content for social media?	
18	How often you post on your social media?	
19	What the social media platforms are you using for the museum? And why?	
20	Who manage the museum's social media?	
21	As a member of staff related to the web site and social media, what do you see as some up-and-coming social media platforms?	
22	How do you evaluate your museum social media platforms or tools for effectiveness?	
23	What other traditional media do you use to promote your museum and events?	
24	Does the museum have any web design, social media or online marketing consultant?	
25	Do you have an online marketing strategy?	
26	If yes what is your online marketing strategy?	
27	Do you have an email contact database of visitors?	
28	Do you have a regular electronic newsletter?	

APPENDIX F: THE STANDARD OPERATION PROCEDURE (SOP)

Interview's Standard Operation Procedure (SOP)

INSTRUCTIONS

Good morning (afternoon). My name is Muneer Hamed. Thank you for your participation. This interview focuses on the museum website, social media and museum's digital marketing. In all parts I will ask you about your experiences as a member of staff at this museum. The purpose is to get your perceptions of your experiences in promoting/marketing the museum. There are no right or wrong or desirable or undesirable answers. I would like you to feel comfortable with saying what you really think and how you really feel.

TAPE RECORDER INSTRUCTIONS

If it is okay with you, I will be recording our conversation. The purpose of this is so that I can get all the details but at the same time be able to carry out an attentive conversation with you. I assure you that all your comments will remain confidential. I will be compiling a report which will contain all members' comments without any reference to individuals.

PREAMBLE/CONSENT FORM INSTRUCTIONS

Before we get started, please take a few minutes to read this preamble (read and sign this consent form). (Hand Research ethics form) (After Research ethics form is returned, turn tape recorder on.)

Q1 Do you think a website is important for museums?

Q2 Who are your main audiences and do you think your website reaches them? And how do you know?

Q3 What is the main purpose (aim) of the website for your museum?

Q4 What are the most important content areas for the website?

Q5 How often is the website updated? And who does that?

Q6 How will users be notified about updates to the website?

Q7 How do you evaluate your museum website for effectiveness?

Q8 Who designed the museum's website?

Q9 Do you think your website has an appropriate design?

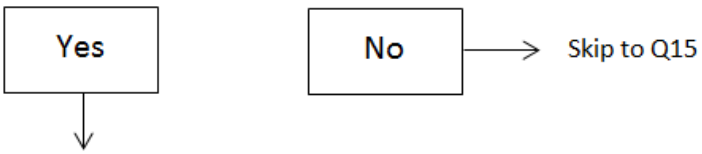
Q10 Did you or the designer do any research for this design?

Q11 Do you think social media is important for museums?

Q12 What is the main purpose (aim) of using social media for your museum?

Q13 Are your audiences for social media different from the website?

Q14 Do you think your social media platforms or tools reach your audiences?



Q14b How do you know?

Q15 What are the main types of content you post on social media?

Q16 What are the design features you consider when developing content for social media?

Q17 How often do you post on your social media?

Q18 What social media platforms do you use for the museum? And why?

Q19 Who manages the museum's social media accounts?

Q20 Is he/she working full time or part time? Fixed hours or flexible?

Q21 What is their background?

Q22 Do you know what is the best time for posting on your page or account?

Q23 How do you evaluate your museum's social media platforms or tools for effectiveness?

Q24 As a member of staff related to the web site and social media, what do you see as the main up-and-coming social media platforms?

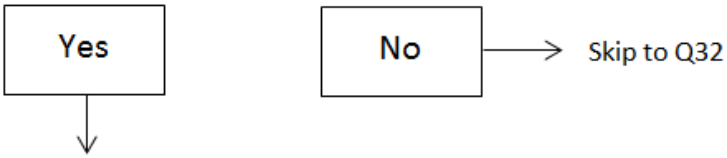
Q25 What other traditional or electronic media do you use to promote your museum and events?

Q26 Does the museum have any web design, social media or online marketing consultant?

Q27 Do you have an email contact database of visitors?

Q28 Do you have a regular electronic newsletter?

Q29 Do you have an online marketing strategy?



Q30 what is your online marketing strategy?

Q31 How have you built your online marketing strategy?

Q32 What has been your most successful online promotional activity?

Q33 What is the main advice you would give to a museum in its use of digital promotion?

Great!

Thank you. We hope that you've enjoyed this interview.

APPENDIX G: THE FULL INTERVIEW SUMMARY WITH THE MUSEUM STAFF IN KSA AND UK

Questions		N-1	N-2	N-3	N-4	D-1	D-2
1	Do you think a website is important for museums?	Yes	Yes	Yes, Sure.	Yes, sure.	Yes	Yes
2	Do you think your web site reaches your audiences?	Yes, but need to be developed	Yes	No	Yes	Yes	Up to some point
3	What is the main purpose (aim) of the website of your museum?	Knowledge	News	Reaching the audience	Knowledge, information, news, museum's friends	Knowledge	Advertising
4	What are the main content areas for the web site?	Present the museum's collection, events and news	Present the museum's collection and news	Knowledge, information	Knowledge, information, news	Information and knowledge	Events
5	How often is the web site updated?	Quarterly	Weekly and it will be daily	Not regularly. 1 or 2 per month	Less than a month	Always	Every two weeks
6	How will users be notified about updates to the web site?	Through the IT department, advertisement and media	N/A	No	No	Yes	SM
7	How do you evaluate your museum web site for effectiveness?	The number of door visitors, and a lots of then have taken the information from the website	The number of door visitors and direct communication	No	Questionnaires for visitors, website visitors	The engagement with the website visitors	The number of visitors and the engagement (online)
8	Who designed the museum's web site?	Employees	Employees	N/A	Employee	An employee	Me
9	Do you think your web site has an appropriate design?	Now, it has not	Very good but also needs development	Ok	No	Not as we want	It needs development
10	Did you or the designer do any research for this design?	They should done that	They should done that	N/A	No	Yes	A small study
11	Do you think social media is important for museums?	Yes, sure	Yes	Yes, very important	Yes, very important	Yes	Yes
12	Are your audiences for the social media different from the website?	Yes and no. maybe similar.	They are almost different	No	Would be different, more young people likes SM	Some time	Little different
13	Do you think your social media platforms or tools reach your audiences?	Maybe for the group age of 15-35 years old	It is the trend now	N/A	N/A	yes	yes

14	What is the main purpose (aim) of the social media for your museum?	Sharing Events, news and knowledge	N/A	No social media yet	Coming soon	Advertising for the web site	To reach as much audience as possible
15	What are the main typed of content you post on social media?	Simple, flashing and fast	N/A	N/A	Will be: Advertising, Knowledge, information	Knowledge	News and events
16	What are the design features you consider when developing content for social media?	Will start in the early 2015	N/A	N/A	Should be formal	It should shows the identity of the museum	Should be same content through al social media tools
17	How often you post on your social media?	N/A	N/A	N/A	Not yet	Depend on events	Daily
18	What the social media platforms are you using for the museum? And why?	Twitter, Facebook, Instagram and WhatsApp. They are the most popular in SA.	N/A	N/A	Twitter as the first step	Twitter, Facebook, Instagram. They are the most familiar	Twitter, Facebook, Instagram. They are the most familiar
19	Who manage the museum's social media?	Media unit in the department of visitors relations	N/A	N/A	Marketing department	Employee	Employee
20	As a member of staff related to the web site and social media, what do you see as some up-and-coming social media platforms?	Yes, will change within the technology	N/A	Yes, these platforms may be changed to others. Some will disappear and others will come	Yes, these platforms may be changed to others Some new will come by the time	They may change dramatically	There are new tools every time
21	How do you evaluate your museum social media platforms or tools for effectiveness?	Likes and followers	N/A	N/A	followers	Likes, following and engagements	Likes, followers, retweets and engagements
22	What other traditional media do you use to promote your museum and events?	TV, Radio, news and printed advertisements	N/A	TV, Radio, Printed advertisement	Printed advertisement, TV, SMS, Radio	Little	News and Brochure
23	Does the museum have any web design, social media or online marketing consultant?	Not for the museum, but within the Saudi Commission for Tourism and Antiquities (SCTA)	Yes as a new idea	Got help from an consultant	Yes	Yes	No
24	Do you have an online marketing strategy?	Yes	N/A	Maybe no	Just started	Yes	No
25	If yes what is your online marketing strategy?	SM and museum's friends	N/A	N/A	Museum's friends	e-shop	N/A
26	Do you have an email contact database of visitors?	Yes	Yes	Yes	Yes	Yes	Yes
27	Do you have a regular electronic newsletter?	No	no	No	No	No	No

Questions		B	S
1	Do you think a website is important for museums?	Yes, Very important	Very, it means that we can reach visitors that aren't local to the area and those of a younger age. It also means that we can provide a lot more information in one place that browsers can pick through and read what is appropriate to them.
2	Do you think your web site reaches your audiences?	A wide range of people Yes the web site reaches them	N/A
3	What is the main purpose (aim) of the website of your museum?	The encourage people to visit the museum And to raising awareness.	To draw in potential visitors and re-engage previous visitors. As a not for profit charity, we wouldn't be able to offer educational content if we did not have paying visitors.
4	What are the main content areas for the web site?	The content all about museum's 8 sites and rising money from tea room and venue hire We not have any guidelines for content	N/A
5	How often is the web site updated?	Now, daily In the old website couple times a week Me and Raya	Very regularly, sometimes daily. If there is a new event to advertise or a change in the galleries, the website is always updated to reflect that and provide an accurate view of the National Space Centre.
6	How will users be notified about updates to the web site?	Through social media	New pages for events or a new exhibit are always posted about through social media and we also have adverts down the side of the website which rotate through our special events pages. If the changes are general corrections users will not be notified.
7	How do you evaluate your museum web site for effectiveness?	It is brand new Analytic tools like Google analytic	
8	Who designed the museum's web site?	A company called error	NSC Creative, our in-house design company.
9	Do you think your web site has an appropriate design?	Yes	Yes, it is simple, themed and easy to use. It also reflects design elements throughout the centre, for example, the orange 2.0 characters that jump around the 'book now' button on the website also feature in our planetarium shows and general signage.
10	Did you or the designer do any research for this design?	Yes, We looks to other museums websites and we did a brief And I think the company did it as well	N/A
11	Do you think social media is important for museums?	Yes	N/A
12	Are your audiences for the social media different from the website?	I think exactly the same	N/A
13	Do you think your social media platforms or tools reach your audiences?	yes	N/A

14	**What is the main purpose (aim) of the social media for your museum?**	**Push you out** **Find what is going on and being part of this wide network**	**N/A**
15	What are the main typed of content you post on social media?	as long as it is kind of relevant	Updates to the website, special event news, space facts. Generally information to keep viewers engaged in science and space as well as the visitor centre.
16	What are the design features you consider when developing content for social media?	Friendly style. We try to post images	N/A
17	How often you post on your social media?	there is no definite number of time	At least daily, usually a few time a day. It depend on how many exciting things we have going on!
18	What the social media platforms are you using for the museum? And why?	twitter and Facebook and we use Pinterest YouTube YouTube reaches most in terms of videos and it is very good way to share Facebook is just the numbers and we can see that face book brings more traffic twitter because everyone talking to each other	Twitter, Facebook, Pinterest as they have a large number of users and we have found that we have a lot of interaction with the public on those outlets.
19	Who manage the museum's social media?	There is no social media staff Only me and Reya For special thing they can give the password to someone to post, maybe two hours a day	We have a dedicated Social Media Manager.
20	As a member of staff related to the web site and social media, what do you see as some up-and-coming social media platforms?	I think phone based things more like messages to each other. You can definitely say there are some going some coming	N/A
21	How do you evaluate your museum social media platforms or tools for effectiveness?	We can see the effect of social media and changing the web site. We can see more people come to activities. some questionnaires or surveys to the people come in and it is not reliable (if long)	N/A
22	What other traditional media do you use to promote your museum and events?	Posters and print. Flags procure and newspaper ads	N/A
23	Does the museum have any web design, social media or online marketing consultant?	No	We have an in-house Web Designer and our Social Media Manager also freelances as an Online Marketing consultant.
24	Do you have an online marketing strategy?	No	N/A
25	If yes what is your online marketing strategy?	I don't think so	N/A
26	Do you have an email contact database of visitors?	Yes	Yes, people can choose to sign up on our website, whether they have visited or not.
27	Do you have a regular electronic newsletter?	Yes	Yes, monthly.

N	Questions	Interviewee (M)	Interviewee (P)
		Face to Face, about 86 min(About the University)	Face to Face, about 26 min(About the Brand)
1	Do you think a website is important for museums?	Yes.	Very important.
2	Who are your main audiences and do you think your web site reaches them? And how do you know?	Under graduate students, post graduate students and researchers, the perspective ones. Current students and research from the staff. Business relationship. The university have a very wide audience but the biggest one is the perspective under graduate students. It is not enough now to just to have a website to reach the audience. You should draw people in through channels. We have google analytics to determine where we are going. And to make sure that we adverting where our audience are looking. The key thing we call conversions (conversion activity), which is how many of the people come on the website and translated to people coming here and signed up with the Uni.	Consumers, retailers and anyone want to find out about the brand. Yes it reached our audience. We have direct emails from customers, through social media and analytics.
3	What is the main purpose (aim) of the website for your museum?	There are many functions in the website as there are many stake holders involved. One of our main objectives is to book some body to an open day. Once he come here and talks to people then we stand the chance to convert him to come here.	To build the lifestyle of the brand. The look and the image.
4	What are the most important content areas for the web site?	Depending on who you are looking for. At the Uni are study areas and course pages and research pages. News and events. To show who we are. We are always making sure that we are providing what they want.	The gallery and the videos.
5	How often is the web site updated? And who does that?	Daily basis. The main updates come from marketing and communication and other users and staff.	Every time new collection, annually. Through local company.
6	How will users be notified about updates to the web site?	Usually by social media.	We didn't necessarily notify them, but we use social media to say that this is the new campaign, this is the coming change.

7	How do you evaluate your museum web site for effectiveness?	Google analytics. Asking some undergraduates about it and survey as well. Buying some insights from marketing agencies.	Analytics, SEO and are people talking about this.
8	Who designed the museum's web site?	Agencies. We have brand guidelines. Agency helped us to make all the componence done.	We create the look, and we built it together with a local company.
9	Do you think your web site has an appropriate design?	Currently the website under transitions. I think it will be. The last time it was 2011 and last year 2013	Yes.
10	Did you or the designer do any research for this design?	We started from the point of brand them some proses and dialog.	We want to create a story. And the company come up with the layout of the website.
11	Do you think social media is important for museums?	I think it is different channel. What happens in social media is engagement. It is very quick doesn't last long. And it is great way to reach and engage people in deferent demographic.	So important.
12	From your point of view, what is the purpose of social media for museums?	PR scene, communication scene and communicate with our current students and also, partners and industries. Also, for perspective students.	Building the brand awareness and giving, exposing us to new customers the brand credibility.
13	Are your audiences for the social media different from the website?	The website is more formal than the social media. I don't know for sure. The current students are more participated with social media.	Relatively the same people.
14	Do you think your social media platforms or tools reach your audiences? And how do you know?	I think they reach certain segments of our audience. The interaction is more important than the number of followers or likes.	Yes, Analytics, activity and engagement.
15	What are the main types of content you post on social media?	Events, news and opportunities.	F, t, I : imagery, daily activity L: B2B style
16	What are the design features you consider when developing content for social media?	In social media for pictures, it is doesn't have to be quit sharp as in the website. Using images and videos to get more share. It is really about the message not how it looks and feels.	We created a design guide line. Anybody from the company want to post anything need to be in certain style certain look. Every thin uniform.
17	How often you post on your social media?	Every day all the time. (the core activity happens only at working day and time)	At least 2 times a day. Video monthly 2 monthly. Li: when needed.
18	What social media platforms	T f Y g+ I P L	F t I P L Snap Vine Premu and Y

	do you use for the museum? And why?	The market decides.	F & t the most well known platforms L: Business P: Brand inspiration Snap Vine : Share daily activities. (more fun) Primo: Show outside of our website.
19	Who manage the museum's social media accounts?	Digital director, brand manager, Social media manager. ,,,	A team. She lead it as a head designer.
20	Is he/she working Full time or part time?		Pat time and Full-time for some. Normally a team of 2-3 . Flexi hour from anywhere may be from home.
21	What is their background?	Vireos, For example a young person comes from students (because of the same demographic).	Mix. Anybody with general interest in social media.
22	Do you know, what is the best time for posting on your page or account?	We usually do just before lunch time, before midday and evening. Usually when people stop to doing day to day activities.	Yes. Lunch time and end of day.
23	How do you evaluate your museum's social media platforms or tools for effectiveness?	I don't know exactly how they do that. The engagement, share and I know that they trying to advertise on social media. Depends on what you want to do? What are your objectives?	User engagement. Likes and followers. Getting new people liking us. We ask some new followers and likers why they liking us?
24	As a member of staff related to the web site and social media, what do you see as the main up-and-coming social media platforms?	There always going a point where you saturated. There will be something come up.	Facebook still same Snapchat is coming.
25	What other traditional or electronic media do you use to promote your museum and events?	To promote an event, there would be materials going out. Bus stop advertising. Cinema advertising. (Just before an open day). The timing of the advertising it a key think. We not do newsletter at the moment. Paper ads with people we have contacted with.	Emails, e-newsletters
26	Does the museum have any web design, social media or online marketing consultant?		No. The web designer.
27	Do you have an email contact database of visitors?	We have CRM system. All contact segmented.	Yes.
28	Do you have a regular electronic newsletter?	NO, We target people.	Yes. Every 2 weeks. 2 pages.
29	Do you have an online	We have campaign cycled with the	There is an overall strategy.

	marketing strategy?	student.	
30	If yes, what is your online marketing strategy?		We have content calendar about what is coming event that we can relate and promote our brand to. Competitions.
31	How have you built your online marketing strategy?		Try and error. None of us from marketing background. Research about good and bad things.
32	What has been your most successful online promotional activity?	Hard to say because we have a big mix.	Hashtag competitions.
33	What is the main advice you would give to a museum in its use of digital promotion?	To really understand your audience and what they like and why they want to engage?	Actively engage with users.

APPENDEX H: TWITTER ANALYSIS SHEET

Twitter Analysis Sheet

Twitter account of : @spacecentre (spacecentre.co.uk)

Day	General					Tweets											
							Types			Content							
	Tweets	Following	Followers	Favourites	Lists	Time	Core	Relevant	Reply @	Text	Link	Picture	Video	#	@	Retweet	★
27/11	6,120	162	8,583	169		4:45P	✓				✓	✓			✓	19	13
						5:40P	✓				✓	✓				7	5
28/11	6,123	162	8,580	169													
29/11	6,129	161	8,581	169		4:05A			✓								
						4:30P	✓				✓	✓				1	2
						6:40P	✓				✓	✓				2	3
30/11	6,124	161	8,581	169		6:48P	✓				✓	✓				2	1
						7:30P	✓					✓				12	6
1/12	6,145	161	8,600	171		4:30P	✓				✓	✓				5	2
2/12	6,145	161	8,600	171								✓					
						7:09P	✓				✓	✓					1
3/12	6,145	161	8,600	171		6:31P	✓							✓	✓	6	3
						2:40P	✓				✓	✓				4	5
4/12	6,145	161	8,600	171													
5/12	6,148	161	8,548	171		4:14P	✓				✓	✓				3	2
6/12	6,152	161	8,602	171		4:44P	✓				✓	✓				2	2
7/12	6,152	162	8,602	171		6:18P	✓				✓	✓				12	7
						6:49P	✓				✓	✓				4	3
8/12	6,152	162	8,602	171		1:15P			✓								
						3:20P		✓				✓		✓	✓	124	166
						6:26P		✓			✓	✓				177	164
						7:34P		✓			✓	✓		✓	✓	67	112
						8:47P		✓			✓	✓				88	86
9/12	6,152	162	8,605	171		2:40P	✓					✓				5	4
						4:01P	✓				✓	✓				1	2
						5:15P	✓				✓	✓				5	12
						6:28P	✓				✓	✓				4	1
						7:45P	✓				✓	✓				2	
10/12	6,153	162	8,604	171		1:01P	✓				✓	✓				1	1
						2:11P	✓				✓	✓					
						4:01P	✓				✓	✓		✓		4	
						5:55P	✓				✓	✓					
11/12	6,160	162	8,610	171		4:30P	✓				✓	✓				2	1
						4:47P		✓					✓	✓	✓	67	116
						6:05P	✓										2
12/12	6,168	162	8,610	171													
13/12	6,164	162	8,613	171		4:30P	✓				✓		✓	✓	✓	33	31
						6:59P	✓			✓	✓			✓	✓	4	4
						1:42P		✓				✓		✓	✓	25	18
14/12	6,167	162	8,615	171		4:19P		✓			✓	✓		✓	✓	64	90
						11:47A		✓		✓				✓	✓	8	4
						5:25P	✓				✓	✓				101	114
						6:21P	✓				✓	✓				9	5
						7:05P	✓				✓	✓			✓	1	
						7:45P		✓						✓	✓	6	8
						8:49P		✓				✓			✓	44	69

APPENDEX I: AN EXAMPLE OF TWITTER ANALYSIS MONTHLY REPORT

يناير 2016 • 31 أيام

ملخص يناير 2016

التغريدات ٢٠٤	مرات ظهور التغريدة ٤٠٩ ألف
زيارات الملف الشخصي ٣٤,٥ ألف	الإشارات ٣٢٣
متابعون جدد ٩٥٦	

التغريدة الأفضل تم الحصول على ٣٣,٠ ألف مرات الظهور

تصور تقريبي لـ #المسجد_النبوي عندما اسسه #النبي ﷺ
#متحف_دار_المدينة
#قصة #المدينة_المنورة عبر #التاريخ
pic.twitter.com/fl6w4UDyqf

213 ♥ 382 ↻ 19

عرض جميع أنشطة التغريدة

عرض نشاط التغريدة

الإشارة الأفضل تم الحصول على ١,١٤١ المشاركات

حسان طاهر hassan,
@abushadi_31 · ٢١ يناير

I was honored today to met #Turkish researcher Mr @Talhaugurluel at @Daralmadinahmus we shared a lots of topics. pic.twitter.com/TH1mYCaMcd

56 ♥ 12 ↻ 1

عرض تغريدة

المتابع الأفضل يتبعه ٦٢٢ ألف من الأشخاص

#استخراج_تأشيرات
@agent_hajj

استخراج تأشيرات سائق ومخدمة وعامل خلال ٢٤ ساعة بسعر مغري للتواصل واتس آب 0542136335

عرض لوحة معلومات المتابعين عرض الملف الشخصي

تغريدة الوسائط الأفضل تم الحصول على ١٤,٨ ألف مرات الظهور

#مدينة
#عبدالعزيز_كعكي
—
#حجرة_المدينة صحيحة
.. وهي طعام وشفاء
.. وثمرة من ثمار الجنة

pic.twitter.com/nYNT1zWh95 goo.gl/TJzjwH

Jan 2016 • 31 days

TWEET HIGHLIGHTS

Top Tweet earned 3,678 impressions

During this mid term holiday
Make our place is your choice to visit.
—
#DarAlMadinahMuseum
story #madinah
pic.twitter.com/OueQpdh0yN

View Tweet activity

View all Tweet activity

Top mention earned 250 engagements

حسان طاهر hassan,
@abushadi_31 · Jan 31

#DarAlMadinahMuseum

Museum offers insight into history of Madinah
By @h_shahad @Saudi_Gazette @MadinahMuseum

saudigazette.com.sa/saudi-arabia/m...

10 ♥ 5

View Tweet

Top media Tweet earned 2,338 impressions

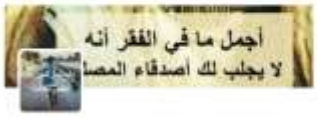
Our open #gallery is full of historical and memorable collections and models
#DarAlMadinahMuseum
#Madinah pic.twitter.com/1ZbZO3LOSX

1 ↻ 5 ♥ 3

JAN 2016 SUMMARY

Tweets 118	Tweet impressions 73.2K
Profile visits 5,540	Mentions 35
New followers 110	

Top Follower followed by 14K people



ماجد مبروك الجهني
@majd1401

APPENDEX J: DAR AL-MADINAH MUSEUM'S FIRST E-NEWSLETTER (ARABIC)